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Cave Art, Perception and Knowledge

Mats Rosengren

Cave Art, Perception and Knowledge

Also by Mats Rosengren

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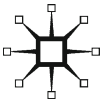

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In memory of

Per Rosengren, 1933–2006

John Michael Krois, 1943–2010

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On the history of the interpretation of cave art: 'The cave of doxa – reflections on artistic research and on cave art', *Art Monitor* # 2, Faculty of Fine, Applied and Performing Arts, Göteborg University, spring 2008.

On cave art and perception: 'On creation, cave art and perception – a doxological approach', *Thesis 11*, vol. 90, # 1, 2007, Online ISSN 1461–7455, Print ISSN 0725–5136.

On Castoriadis and Cassirer: 'Radical imagination and symbolic pregnance – a Castoriadis Cassirer connection', in *Embodiment in Cognition and Culture* (2007), John Krois, Mats Rosengren, Angela Steidele, Dirk Westerkamp (eds), Amsterdam: John Benjamin's Publishing Company, ISBN 978 90 272 5207, and 'Cave art as symbolic form – a question of technique' in Ernst Cassirer on Form and Technology. Contemporary Readings (2012), Aud Sissel Hoel and Ingvild Folkvord (eds), London: Palgrave Macmillan.

1
Outside

Caves and philosophy go well together. In its very beginning, Western philosophy appropriated the cave, most eminently through Plato's famous simile in Book VII of *The Republic*, as a metaphor for the human situation. Ever since, the chief objective of man appears to have been to get out of his troglodytic settings; to free his mind of the shadows, the smoke and the images coming out of the deep recesses of the earth. Metaphysics as we know it is all but unthinkable without the image of the cave and, no doubt, without the images *in* the caves. The constant urge in Western thinking to find an absolute beginning cannot, it seems, free itself from this chthonian fantasy. It is as if the emergence of mankind inevitably has to be connected with coming out of the earth, breaking free in an upward surge towards the stars and the sun, leaving body and matter behind. Enlightenment is but a metaphorical prolongation of such a tortuous thinking. This book is about bringing thinking and philosophy back into the caves again. It is about what the mind can find in the caves, as well as what the caves can bring to mind.

Some 33,000 years ago, our forbears penetrated deep into the bowels of the earth in what is now the Ardèche region in southern France. There, in the penumbra of a labyrinthine cave, lit only by grease lamps and, perhaps, torches, they prepared the walls of the cavern that, since its discovery in 1994, has been known as the Chauvet Cave. Here, they made paintings, drawings and markings that we now claim to recognize as lions, horses, mammoths, rhinoceros and as human hands pressed against the rock, positive and negative, in isolation or together. The swelling archaeological literature concerned with the painted caves of the Palaeolithic era tells us over and over that the purpose of such creative activities will forever remain unknown to us.[1]

But the traces remain: in Chauvet Cave, the oldest of the painted caves known to us;[2] in Lascaux in Dordogne, perhaps the most famous one; in Altamira in northern Spain, in 1879 the first one to be 'discovered'; in Niaux in the Pyrenees, known and frequented in modern times since at least the beginning of the seventeenth century; and in many others. Some of the very first (and at the same time highly complex) of the symbolic forms known to men still elude our grasp; yet they are among the most tangible, palpable symbolic expressions there is. No wonder that they have aroused the scientific imagination, occasioning a multitude of explanations, a multitude of interpretations and reinterpretations.[3] With such rich material, and with an almost negligible context by which to guide and delimit any decipherment, the discipline of studying the so-called Palaeolithic mural cave 'art' has become a medley, a catalogue of the scientific modes of the twentieth and early twenty-first centuries.[4]

This book is a study of the emergence and the development of cave-art studies. Not in order to make an extensive survey or history of the discipline, but to make a case for a specific take on some urgent philosophical questions relating to what we can know, what we may hope for and how we can make our worlds. The story of how Palaeolithic art (that is art from approximately the period between 40,000 and 10,000 years before our time) has been discovered and not discovered – seen and not seen, understood and still not understood – will allow me to approach scientific and philosophical questions, such as: What does it take to see what is there to be seen in the caves? What and how can we know about cave art? Is it really *art* we find in the caves? Will we ever be able to make sense out of it? And what are the conditioning factors for us humans when making sense and knowledge? Questions of this kind are common to the branch of philosophy known as epistemology. However, I am not presenting an epistemology of cave-art studies. No, I will let cave-art studies, its history and its questions, play the role of laboratory for developing another account of how we humans go about making knowledge and producing sense in and for our world.

Elsewhere, I have called this approach *doxological* in order to clearly distinguish it from traditional epistemology.[5] I use the term *doxology*, hoping to reactivate its antique etymological sense (and to neutralize the sense, *praise*, favoured by theologians[6]), in order to designate a teaching about *doxa* and *doxai*. That is, a teaching about what we humans hold true, what we believe, what we live by and what we claim that we know. As I will present this perspective in more detail below, suffice it for the moment to say that doxology (as I use it) takes its cue from Protagoras's

famous dictum that man is the measure of all things; doxology employs the techniques and perspectives of classical rhetoric and attempts to integrate them in a contemporary theory of embodied knowledge. Two of its central tenets are that doxa is productive – of knowing and knowledge as well as of conceptual distinctions, such as between episteme and doxa, or reality and fiction – and that there is no conceivable position for man outside of every doxa. All knowledge of ourselves and of our world is immanent and doxic – hence, a doxology about doxa, the ever-changing web of truths, knowledge, facts and beliefs that we live by in our human cave, as it were. But not an epistemology about *episteme*, the term Plato used to designate the knowing of the eternal, unchanging and objective Reality, where the pure forms of Truth and Knowledge reside in a place above the heavens.

This book advances a specific perspective: We should not try to get out of our human cave, but work on getting to know it even better. We must realize that there is no enlightenment waiting outside the den. Rather than projecting our hopes toward distant suns and stars, we should look for the mind in the cave. So I profoundly agree with the French philosopher Cornelius Castoriadis, when he writes:

> To think is not to exit the cave, nor to replace the uncertainty of the shadows with the clear-cut contours of the things themselves, the flickering light of a flame with the light of the true Sun. It is to enter the Labyrinth, or more exactly to make the Labyrinth be and appear [*faire être et apparaître*] whereas we could have stayed 'on our backs among the flowers, facing the sun'.
>
> To think is to lose oneself in the galleries that exist only because they are relentlessly excavated by us; it is to move around in circles at the end of a dead-end gallery where the entrance has closed behind us – until this circular movement inexplicably opens cracks in the walls that we can use.
>
> The myth definitely wanted to tell us something important, when it presented the Labyrinth as the work of Daedalus, a man.[7]

The major themes and ideas that run through the pages of this book are: Western philosophical reflection on knowing and knowledge interlinked with cave art and cave-art studies and the notions of symbolic forms and of imagination and creation.

One aim is to show that the increasing importance, during the last four or five decades, attached to concepts like creation, construction or production is by no means a coincidence or the result of a passing

postmodern or romantic flair for *poeisis* or creative imagination. Rather, it is the result of a successively more and more conscious and productive reflection. Some twenty years ago Donna Haraway declared:

> We need the power of modern critical theories of how meaning and bodies get made, not in order to deny meanings and bodies, but in order to live in meanings and bodies that have a chance for the future.[8]

Today, researchers in all branches of science are becoming as acutely aware of the importance of processes of creation and production as they are of the inevitability of embodiment, also within the academic disciplines. These processes are now being turned into objects for critical reflection and scientific scrutiny, which signals a shift, heralded by Haraway and others, in the history of Western scientific thought – which seems, at least to me, to be a rare and valuable event.[9]

Another aim, closely connected to the first, is to make a case for the importance of three philosophers of the twentieth century: Cornelius Castoriadis, Ludwick Fleck and Ernst Cassirer. Castoriadis's reflections on the problems and possibilities of construction and creation will occupy a prominent place all through the text. He would no doubt have welcomed the developments of the last decades and have seen them as a most needed counteraction to the 'cover over' of human autonomy and the human capacity to create, a 'cover over' that he strongly resented.

For Castoriadis, this 'cover over' concerns both the fact that we humans always posit the laws of our world and, thus, inevitably, are autonomous (in the original sense of the word; giving ourselves our laws); and that the continuous instituting of new forms for and in our world, in which we humans are (whether we recognize it or not) engaged, is dissimulated. Western scientific thinking has effectuated this 'cover over' by presenting our world as an independent, ready-made reality and ourselves and our societies as subjected to given, immutable natural or social laws and/or as being the results of some divine intervention. The scientific task, according to this view, is never to create knowledge, but to register, to get the facts and combine them in order to complete the world puzzle. For Castoriadis, this is delusional, and he makes a strong case for seeing society and history as creations, first and foremost, and auto-creations at that.

Castoriadis would have found an ally in Ludwick Fleck, the Polish microbiologist who, already in the 1930s, formulated how and under what conditions such creation of facts and knowledge could take place.

Fleck singles out three major factors in how we humans create our world and our facts – thought collectives, thought styles and the always already-existing knowledge. I use these concepts repeatedly to specify the workings of doxa in different settings.

One of the most prominent features of human creation, of the way we produce sense, construe meaning and make worlds, is that it always already takes place in and through our bodies, and is at the same time always embodied in symbolic forms. The German philosopher Ernst Cassirer states that even the most basic and rudimentary forms of consciousness are symbolic through and through. This statement is supported by the much more recent results put forward in contemporary biology and cognitive science, developing on the notion of embodiment of meaning. Cassirer's notion of symbolic pregnance will, I am quite sure, show its worth in the subsequent discussion.

What I propose is an attempt to readdress and reformulate, in a resolutely *post*-post modern manner, some aspects of the traditional questions of knowledge, truth and subject. That is, I will pay heed to what post-modern critiques of these and other notions imply today – philosophically, epistemologically and politically speaking. Many of these multilayered and seriously intertwined implications will affect my own text, its form as well as its content, rendering suspect all aspirations to universality, completeness, foundations or systematic *Aufbau der Welt*. But I do not, therefore, give up claims to truth, knowledge and intentionality in favour of some kind of irresponsible play or unchecked dissemination of sense and meaning. Only a very poor reading of the works of Fleck, Castoriadis or Cassirer (and other thinkers working in the same direction) could end up in such a mindless conclusion.

A doxological approach entails neither relativism nor objectivism in the received, absolutist senses of these terms. What is at stake is much more interesting. The theorist of science, David Bloor, once wrote in a well-argued defence of relativism, that the dichotomy between relativism and absolutism seems to be unavoidable – unless somebody would present 'a third way':

> The bare possibility of a third way, for which we do not even possess the concepts, will not allow [us] to escape the grip of the dichotomy. The logical possibility of a tunnel under the perimeter wire doesn't get you out of prison. Only a real tunnel will do that. What is needed from those who think they can escape the dichotomy is a clear exemplification of the alleged third way between absolutism and

> relativism. None has ever been given. I will believe it when I see it, but not before. Until then, conceptual clarity requires the dichotomy to be accepted.[10]

I would like to think that doxology in my sense could provide such a third way. The key points supporting Bloor's position seem to be, firstly, the lack of concepts for talking and thinking beyond the absolutism/relativism dichotomy and, secondly, that no examples have been given as to how to escape the grip of this dichotomy. Doxology does not provide new concepts in a strict sense, but reworks and transforms old ones. Showing that even the dichotomy in question is inevitably a doxic product (on a par with reality/illusion and with immanent/transcendent) undermines the sharp distinctions supporting this kind of dichotomous thinking. Following in the wake of, and using, Donna Haraway's idea of *situated* knowledge,[11] I would claim that doxology makes a case for the existence of a third possibility beyond all dichotomies. Working in, and with, the laboratory of cave-art studies, I hope to show that this is more than just a claim. In this book, we will return to these issues many times, and in many different ways.

Thus, I will use the discussion of the discovery of cave art and the subsequent development of the discipline of 'cave-art studies' to spell out more precisely what I expect from (re)introducing doxology in philosophical reflection. In fact, all the major doxological themes are actualized in and through the study of the Palaeolithic caves: the questions, in the human and social sciences, of the new, of creation, of the human measure, of technique, of interpretation, of knowledge, of art and thinking and of method. In the wake of Jacques Derrida, among others, it is clear that the 'old words' are the only ones we have (I do not see would be the meaning of not accepting this), but in my treatment of the problems actualized by the decorated caves I will try to make these problems embody, if not exactly new, then at least other meanings than the received ones. My doxological approach is, therefore, largely a question of strategy, of practice (writing being such a practice) and of a certain kind of vigilance to never for a moment think that one can actually, in a strict sense, control and limit the meaning of one's sayings and doings, nor sustain any claims to truth in a traditional manner. Yet, and at the same time, as will become evident, the conditions for such control and restriction need not be as strict, as absolute or as clear as tradition would have it for us to be able to claim that we know that some things are true, or that there is subjective responsibility as well as collective action. The caves still have many surprises left for us.

How it is done – a reader's guide

The doxological stance has some methodological and epistemological consequences for how to proceed in making knowledge claims and when arguing:

I will try to show and convince, more than to state or prove, which means that large portions of the text will be interspersed with quotations. This is not due to an aspiration to objectivity, since my selection of what to quote is, unavoidably, a part of the argument being made. The extensive quoting in some chapters is intended as a way of showing something of what the epistemic field of, mainly, cave art studies is like, how it works and how the texts it produces can be read.

This book makes no claim whatsoever to covering the whole field of cave art or of cave-art studies. This is due neither to the vast amount of material that an extensive survey would have to account for, nor to my being lazy (or at least I tell myself so). It is a stance that I have chosen in order to emphasize both the impossibility of total coverage (there will always, and necessarily, be additional untouched issues that spoil every endeavour for completeness) and the futility of assuming such an approach. One main aim is to show that something important, scientifically important, can be said from pinpointing the central topoi organising the doxa of a field of study. The quest for total coverage is at best futile, and is often detrimental to the production of adequate knowing and knowledge.

The overall organization of this book follows a dual pattern, in which opposites incessantly seep into each other, unmaking all neatness and structural rigidity.

In the second section, 'Cave Opening', I present, through a discussion of text and images, some of the elements of what I call the "mimetic curse" in cave-art studies. In the third section, 'Doxa', I lay out the foundations for doxological thinking, presenting Protagoras as a doxologist *avant la lettre*, and the sociologist Pierre Bourdieu as one of his more modern followers. In the fourth section, 'Caves', I discuss the discovery of cave art, ask questions about the artness of the art and make a claim concerning the need for *concepts* in order to see anything at all. I turn, in section 5, 'Doxa', to the microbiologist and theorist of science, Ludwick Fleck, in order to specify even further the workings and possibilities of doxa. Section 6, 'Caves', has a multiple task: retracing and critically discussing the history of cave-art studies and the interpretations made of cave art within the field; trying to expose some of the central topoi of the doxa of cave-art

studies; being explicit about how an interpretation can be doxologically validated and sketching the outlines of the doxa of cave-art studies.

In section 7 (the final major section), the dual structure is intentionally collapsed, bringing both doxa and caves together under a common heading: 'Caves and Doxa'. Here, I introduce and discuss the philosophical anthropologies of Cornelius Castoriadis and Ernst Cassirer, with a special focus on what they say about technique and technology. Cave art is, then, claimed to be a technique, and I try to spell out some positive consequences of bringing the conceptions of the two philosophers to bear on the paintings in the caves.

2
Cave Opening

Some Platonic qualms: the mimetic curse in cave-art studies

Let us briefly look at a decisive moment in the construction of the Western notions of image and depiction: Plato's cave as it is described in Book VII of *The Republic*.[1] It is introduced as part of a long analogy, destined by Socrates to explain the human condition.

Socrates asks us to imagine human beings confined in an underground den. The people have been in the cave from childhood. They are facing the far end of the cave and are chained so that they cannot move. They can only see straight before them. Above and behind them is a blazing fire. Between the fire and the chained people is a wall extending the breadth of the cave. It is, says Socrates, like a screen that marionette performers have in front of them, and over which they manipulate the puppets. Men are constantly passing along the wall, some talking, others in silence, all carrying different sorts of things, such as statues and figures of different shapes and sizes. All of these appear over the wall. Consequently, the people in the cave, prevented by their chains from turning around, see only the shadows cast upon the opposite wall of the cave.

This is the basic structure of the analogy of the cave. Socrates goes on and develops it further in well-known and thoroughly debated ways, making the philosopher into the hero who breaks free from the chains, turns, faces the light of the sun and sees things as they really are. My intention in this book is not, however, to discuss the philosophical content of this famous analogy, but to look upon its implications for, and lasting impact on, Western thought, especially when it comes to the relation between sign and signified; that is between the

pictures (shadows) on the walls of the cave and what these pictures are supposed to be of. There is good reason to explicate the topos relating to depiction that is expressed in the analogy of the cave: We still often are Platonists when it comes to thinking about pictures and images, whether found in caves, on paper or on flickering computer screens.

The Platonic mistake concerning depiction takes on two major forms. First, it presents the pictures as being dependent upon, and produced by, a casual relation to what they depict. In the analogy of the cave, the shadows are the effects of the things whose shadows they are, and the things are in turn the effects of the forms whose shadows they are. Hence, depicting is construed as a cause-and-effect process, which in turn is twofold: In an objectivist reading, it is claimed that if there *is* an object, there *may be* a picture of it, but if there is no object (cause) there will be no picture (effect) of it. As there would not have been pictures (shadows) on the cave wall lest there were objects casting these shadows, and shadows of this precise form, there are no pictures of things that do not exist, nor could there be. Taken in this sense, this way of thinking rules out all possibility of genuinely creative imagination (in whatever way one chooses to understand this term), confining imagination to the realm of combining and depicting what is already there in the world or, ultimately, in the eternal and unchanging world of forms.[2] In a mentalist reading, it is claimed that if there is to be an image (or a tool, or engraving or whatever kind of man-made trace) then it has to be preceded by a 'mental image', idea, or intention of some kind. The image or the tool is thus being reduced to an index pointing to this preceding mental image or intention.

Second, the topos presents resemblance as the major criterion for identifying what the images are, depict and mean – or, to use a more Platonic phrasing, it speaks of pictures primarily in mimetic terms, consequently placing their origin, form and meaning somewhere else than in the pictures themselves. A consequence of this – more will be shown further on – is the inclination to place the interpretation of an image on equal footing with identifying what it is a picture of, thus creating a tendency, clearly visible in the discussions of Palaeolithic art, that I will call *the mimetic curse* in cave-art studies.

Accordingly, the topos rooted in the analogy of the cave tells us that depiction is only possible if there really is something that is *already there* to be depicted, either in the world of the senses (an object) or in the world of forms (an idea). Furthermore, the topos insists upon likeness as the primal criterion for judging pictures – that is for deciding whether something really is a depiction or just some kind of sign, and

for deciding what is the basic sense of the picture (namely, the object that it depicts). Thus, it promotes naturalism, not abstraction, and looks for the sense of the depictions not in the depictions themselves but in what they refer to or point at. All in all, the materiality of the sign or picture is neglected.[3]

In philosophy as well as in other disciplines we should try to undo the metaphysical spell in which our thinking about these matters has been held for so long. In the wake of the critique of the 'metaphysics of presence', we recognize the mistake just mentioned as being part of a more general trend in Western thinking, in which the desire for a unique origin, a stable foundation and an uninterrupted casual chain of events plays an essential part. Commenting upon the consequences of such a desire for Palaeolithic cave-art studies, Jean Louis Schefer writes:

> This phantasm of origin is grounded in a transfer of historic guilt, trying to reconcile or to think art without divorce (in a first paradise or in an initial tragedy) as a 'natural', 'instinctive' expression of the real.[4]

But, as Schefer has pointed out a few pages earlier in his text,

> the primary function of the figures is not to restore or to present the reality (to make a representation of it) – this point of view is that of an art-consumer of the 19th century (or of the dominating ideology of this art).[5]

One aim of this book is to show that the Platonic topos permeates the discovery of Palaeolithic cave art and the attempts to present plausible interpretations of its why and of its wherefore. Just how lingering and, in a sense unavoidable, this both Platonic and nineteenth-century perceptual ideology actually is, will be brought out by a closer look at the development of cave-art studies.

Using some of the conceptual resources produced and created during the last half century in a resolutely doxological way, I will try to reconsider the pit in which we metaphysical, anti-metaphysical and post-postmodern thinkers still dwell. The trick will be, brutally and briefly put, to maintain the notion of reality without oneness; the notion of causality without universality; and the notion of depicting without mimesis. But in order to do that, and before we really enter the caves, my position requires some further explanation, and a few introductory remarks on text and images need to be made.

On texts and images

Debates about how best to identify, understand and interpret the meaning of both texts and images have been part and parcel of Western philosophy ever since its creation. With the benefit of hindsight one may safely say that as soon as one tries to address the problems of texts or images, there is no avoiding the problem of context (or situation, if you prefer a less graphematic phrasing).[6] Inevitably, the context affects our understanding of, and the way in which, we identify images and texts. Nevertheless, no context, of whatever kind, can ever be saturated so as to provide a definitive answer to the question of what something means, or even of what something is. As we have learned from Ludwick Fleck and others, contexts as well as meanings and identifications are constantly changing.[7] The effort to arrest this movement and to try to exhaust all possible interpretations is doomed to failure, not because of the sheer multiplicity of possible alternatives, but because such a totalizing move can never complete its task. 'Something' will always, unavoidably, slip through the grid. There will always be remnants, leftovers, defying any totalitarian ambition to 'cover ground'. The process of constant change inevitably goes on. Fast, or imperceptibly slow, it undermines every attempt at permanent or definite significance, identity or understanding.[8]

The validity of this argument is dependent upon the presupposition that nothing is, nor is *meaningful*, in and for itself, but only in relation to persons, to language, to history, to society and so on – and that every relation is a relation not only in space, but also in time.[9] Relations 'take' both place and time. Derrida's term for this would be *différance*, that is, the very condition for the emergence of sense, experience, identity and consciousness. Thus, *différance*, the ever and always already operating deference and differentiation, is not eliminable, and is what constitutes our experience and enables our sense-making.[10]

Nor could we do without contextualizing. In a sense, there is nothing but contexts – or, in a doxological phrasing, doxai, thought collectives and thought styles.[11] No point of view, no opinion or statement, is produced in a void, but is always conditioned by what was there before. In a very general sense our ever-changing contexts are characterized by our always already being downstream in relation to what went on before. And from this position, we invent, investigate, reform, create, produce and reproduce the contexts we need in our constant and, it seems, inevitable effort to make sense.[12]

Let me, as an opening into the painted Palaeolithic caves and the multilayered problematic that is actualized by them, dwell on two aspects of this sense-making. My first remark concerns the importance of context for identifying and understanding texts. The second will address the same matter concerning images.

Text

By relating a piece of text to a context (linguistic, historical, social and so forth) we may form an opinion about its identity (is this a text?), its meaning (how are the words in the text, taken separately and together, to be understood?), its style (retro or path-breaking?), its aim (ironic or not?), its content (fictional or not?) and so on. To put it briefly, the context allows us to form an opinion about the sense of the text. Here is a very simple, but hopefully illustrative and telling example.[13]

LE CHAT

CHAT

TO CHAT

The same configuration or combination of letters, the same grapheme if you like, can obviously appear as two different texts: a French text saying something about a cat, and an English text saying something about small talk.[14] How do we know when to read 'chat' as a French or an English text? Well, it is a matter of deciding upon what context to relate 'chat' to. In the example above, we see that it may be sufficient to signal a context with small means indeed – a 'le' or a 'to' might do the trick.

From this we may discern at least one thing – *a text is always an inscription in a language*. The grapheme 'chat' is not a text, and we are not able to say anything about its meaning or use, until it has been thus identified, that is, as an inscription in one language or another. But how are we to go about this procedure? Well, some graphemes – such as chat, cap, image, imagination and so forth – seem to need contextual markers for us to be able to tell, whereas others – like *turnabout, fondé* or *öppna* – more or less identify themselves for persons who are capable of recognizing the languages in question (in this case English, French and Swedish).[15] And, of course, the more complex the grapheme, the less possible inscriptions there will be. So, even if there are some words or even paragraphs in *Hamlet* that could pass as French, it is quite obvious

that the work, *Hamlet*, is an English text and, I would like to stress this point, *should* be read accordingly. Why? Well, simply because it *makes sense* when read in English, and it does not when read as an inscription in French. Accordingly, the criterion is practical, and is related to the abilities of a community of readers.

Images

But what about images? They are quite different, are they not? At least if they are not too complicated, and if they are 'figurative' (or mimetic)? Such images carry, as it were, their own context and, consequently, their sense and interpretation, in themselves, do they not?

Well, I am not so sure. Let us look at another, very simple and very well-known example.[16] This is a familiar and much debated figurative image or picture.

How are we to interpret this figure? Is it (a drawing of) a duck, or is it a rabbit, or is it both? As for 'chat' in the previous example, we cannot tell without providing the figure with a context of some sort. In this case the context may be verbal – somebody tells you, 'Look at this – it can be seen either as a rabbit or as a duck', and thereby gives you the key to the meaning of the figure, that is, to how it can be seen. But the contextualizing move may also be of your own doing: You see the figure, you have seen figures like this one before, you 'scan' your picture memory/conceptual memory, you find some kind of 'fit', you add or subtract as you try it on the figure, and then you are satisfied:[17] 'Ah, it is a rabbit looking right, but it can also be seen as a duck looking left!'

Normally, this activity of contextualizing, adapting and adjusting is so fast and unproblematic that you do not notice it: You seem to see

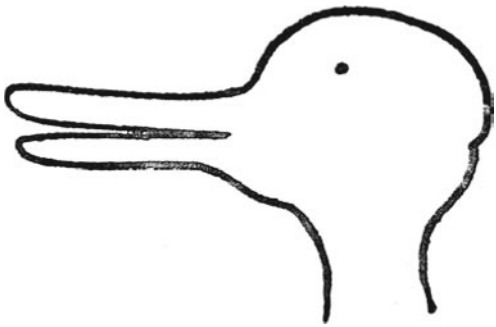

Illustration 2.1 Duck/Rabbit

the figure of the duck/rabbit immediately, and the sense of the figure appears to be a matter of something that is already there, in the figure. Thereby, you tend to forget your own activity in construing what you see, and tend to think of perceiving as something that happens to you rather than as something you do. The active element in perception/cognition is thus ignored.

Nevertheless, as Empedocles already proposed a long time ago, perception needs light of two kinds: the light of the sun and the light of understanding.[18] Without being able to furnish the conceptual context of (at least) 'representation of' and 'rabbit' and 'duck', you would not be able to understand the figure at all. You would see without seeing. That is, your eyes would register the photons coming from the figure, but you would not be able to make sense of them. They would just be visual noise to you. So, to be able to see something as something (and not just to register photons), you need to organize what you see in, or according to, some ordering, shaping or formative process.

I hesitate about which terms to use here, since each term already seems to imply a certain theory or notion of how this organizing occurs – and this is what I am striving not to do prematurely. Since our epistemic situation is irredeemably immanent (meaning that we always already are in the position of the one who sees in both senses, both with the light of the mind and the light of the sun; if not, we would not even be able to recognize the epistemic problems that concern us here) we have to be very careful about what we say, and about the hidden and overt implications of our statements and words. It is so very easy to slip into a vocabulary or way of expression that would (seem to) contradict the doxological approach that is advocated in this book. For instance, when I talk about photons, I do not wish to imply that they are the stuff that light is made of in Reality, taking Reality in the traditional, metaphysical, non-doxological and received sense. But I do want to state that, given the notion of reality that (admittedly, in a vague sense) is dominant within the thought style, and therefore also the doxa, to which I belong, it is a fact that light is made up of photons (and perhaps also of even smaller and more elusive particles or waves), and that this is the reason why one may argue as I just did, without abandoning the doxological stance.

So, to be able to see the drawing as a duck or a rabbit, we need the concepts of duck and rabbit, or we will not see the duck-rabbit at all. But, just as we can learn how to read, we can be taught to see the duck-rabbit, that is, we can acquire the concepts needed to see the figure as a duck-rabbit. For instance, someone could show us how to 'prolong' the figure,

completing either the duck or the rabbit drawing, so as to give us the necessary context for seeing each of the figures. And, as with the text, the more developed and detailed the figure gets, the fewer possible interpretations will present themselves: once we provide the rabbit with a 'body', we will not be able to see it as a duck anymore, and once we have given the drawing a duck filling, it will not make us think of a rabbit anymore.

However, there is more to be said on an even more basic level. Up until now I have not focused on the figure, the drawing 'itself', as it were, the lines that so readily lend themselves to be seen as either rabbit or duck. Do we need a special concept of figure, before we can even see a figure as a figure of this or that? Or, is the ability to see different markings as figures an ability that we are born with, an ability inscribed in our bodies, as members of the symbolic species of Homo sapiens? Judging from recent research in cognitive science – as well as from the works of thinkers like Cassirer, Castoriadis and Derrida – it seems that this is where we encounter the most basic, or simple, effects of what Castoriadis would call the auto-creation of the human world or of the symbolic pregnance inherent in our being human (as Cassirer might have said). Contrary to the duck-rabbit case, we seem to be able to see a figure as a figure (but, obviously, not as 'figure of' this or that) without previously acquiring the concept of figure. We human beings seem to construe our world in forms, shades, smells, feels, shapes, colours, foreground and background without needing to be taught to do so, a world-making ability no doubt.[19]

Even so, we still need to learn to develop and put the ability of sense-making into practice. Its presumed species-related universality does in no way vouch for a universal basic and common understanding of the human world. For instance, and returning to our example, even if we, on a very basic level, tend to create our world in terms of foreground and background, and so forth, we still have to learn how to decode visual representations, even figurative ones, and even ones as simple as the duck-rabbit, just as we have to learn to read texts. Nelson Goodman once said:

> The plain fact is that a picture, to represent an object, must be a symbol for it, stand for it, refer to it; and that no degree of resemblance is sufficient to establish the requisite relationship of reference. Nor is resemblance *necessary* for reference; almost anything may stand for anything else.[20]

He continues, remarking that there is no innocent eye.

> The eye comes always ancient to its work, obsessed by its own past and by old and new insinuations of the ear, nose, tongue, fingers, heart and brain. It functions not as an instrument self-powered and alone, but as a dutiful member of a complex and capricious organism. Not only how but what it sees is regulated by need and prejudice. It selects, rejects, discriminates, associates, classifies, analyzes, constructs. It does not so much mirror as take or make; and what it takes and makes it sees not bare, as items without attributes, but as things, as food, as people, as enemies, as stars, as weapons. Nothing is seen nakedly or naked.[21]

Consequently, following Goodman, the way in which we see images is analogous to how we read texts. In texts as in images, we need to be able to discern one grapheme from another, we need the context of a language or a symbolic form (in the widest sense possible of these terms) in order to make sense of what we read or see. It does not matter that texts, at least in ordinary parlance, do not resemble what they 'are about', whereas so-called mimetic representations are supposed to. One has to learn how to recognize a resemblance for what it is. It is not something given; it is always created from within a certain situation, that is, from within a thought style and a doxa. Even the very paradigm of realistic rendering of the world, such as paintings following the laws of perspective, has to be read according to certain, more or less arbitrary conventions.

To further clarify this point, let us consider Goodman's reasoning about perspective. After having denounced the notion of a realistic picture as an image that will 'deliver to the eye a bundle of light rays matching that delivered by the object itself',[22] he states that 'pictures in perspective, like any others, have to be read; and the ability to read has to be acquired'.[23] Moreover, representations and descriptions are creative. They form, relate and distinguish objects to the extent that nature may be said to be 'a product of art and discourse'.[24] Consequently, Goodman concludes, 'realism is relative, determined by the system of representation standard for a given culture or person at a given time'.[25] Writing this, he is articulating one central tenet of not only his version of pragmatism, but of doxology as well.

It will probably come as no surprise that I find myself in profound accordance with Goodman's position in these matters. His reasoning

is not entirely new, for preceding Goodman there is a long tradition of what I would like to call doxological thought, at least from the first sophists up until some versions of twentieth-century American pragmatism, in which the question of man as the measure has, in different ways, occupied a central position. One aim of my doxology is to formulate this question once again, and try to see what it could mean, today, to say that man or mankind actually is the measure of all things. So, before we re-enter the caves, let us return to the early moments of Western philosophy and see what we may learn about three indispensable concepts for a contemporary doxology: *doxa*, *logos* and *anthropos*.

3
Doxa

Specifying *doxa* I – Protagoras

The sophist Protagoras was perhaps the first in the history of Western thought to assume a doxological – as opposed to epistemological – position. This means that he chose human imperfection, unsure belief and constant change instead of Platonic immobility and certainty. His most famous dictum, the so-called *homo mensura* fragment, is perhaps the most poignant expression of this position:

> Of all things the measure is Man, of the things that are, that they are; and of the things that are not, that they are not.[1]

To comprehend and transform this Protagorean thought and integrate it into a contemporary conception of knowing and knowledge are the first steps in the development of a doxological position. Despite its brevity, Protagoras's fragment lends itself to very different interpretations. At first glance it seems obvious that if we want to understand what it says about all the things that are supposed to be measured by us men, we must have some idea about the kind of 'man' who is supposed to be their measure. And in trying to make sense of Protagoras's words, most interpretations have chosen to focus on how 'man' can be understood in this setting. If one chooses this approach, two possibilities present themselves:

Either 'man' refers to each single man. This would mean that the measure against which things are judged is each and every one of us, taken individually – the fragment would then be the expression of an almost total solipsism. Every human being is locked in his or her own way of conceiving themselves, their world and their fellow-humans. In

such an interpretation, Protagoras is offering no possibility for man to leave his subjective point of view. Everything he knows, believes, sees and does is ineluctably connected to himself and his subjective way of conceiving the world. The only truth available for him will be his own conceptions as there are simply no alternatives.

This is basically the interpretation given by Plato in the *Theaetetus*. He firmly opts for the individual interpretation of 'man', a choice that results in the well-known presentation of the Protagorean stance as being hopelessly subjective and relativistic:

> Socrates: Does he [Protagoras] not say that as each thing appears to me, such is it for me; and as each thing appears to you, such is it to you? And you and I are men, are we not?
>
> Theaetetus: Yes, he says so.[2]

Or, the second possibility, not considered by Plato: to interpret 'man' as referring to mankind *in general*, that is, to humanity as a whole. Thus interpreted, the sense of the fragment could perhaps be fruitfully expanded in this way: We human beings live in a world that appears as it does to us because we are what we are. What we know and think about our world does not tell us anything certain about how the world is *in itself*, since we ourselves are the ultimate measure of what is and what is not. Of course, it might be the case that what we think and know about the world also correspond to what the 'real' world is like (if it is at all possible to use and understand 'real' in this context), but we have no standard, no scale against which to judge this. All we have is our irredeemably human conception of our world, creating an inescapably *human* world – in the sense that it is neither objective in the traditional sense, nor species-neutral – for us to live in and deal with.

Such an interpretation of the fragment appears to be more in line with Protagoras's actual words than the solipsistic Platonic reading. For, as Eduard Schiappa points out, 'Protagoras did not use *anêr* or *andros* (man): he used *anthrôpos,* which can refer to individual human beings or to humanity as a whole (woman included)'.[3] Moreover, and apart from the philological evidenced supporting this more generic rendition, this interpretation seems to be far more interesting than the one advanced by Plato, since it does not prematurely presuppose that Protagoras was just advancing an ill-founded opinion.

But the expressions 'humanity as a whole' and 'man *in general*' hide some difficult problems. For what kind of 'man', what kind of 'we', are

we talking about here? A 'we' referring to some natural essence that would be common for every member of the species *Homo sapiens*? Or, at least, a 'we' that in some way stands for a fundamental and (for all humans) common way to conceive of the world, of themselves and of other people? Maybe something like our ability to distinguish between form and background, as discussed earlier? Is Protagoras's dictum an expression of a Kantianism *avant la lettre*?[4]

Perhaps. Such an interpretation appears to be more reasonable than the solipsistic one, but it rests on an implicit, quite unsettling, universalism. The claims to knowledge contained in the Kantian interpretation appear to be unfounded, to say the least – just think about what I said previously concerning the duck-rabbit figure. No apprehension, not even of our purported human nature, escapes the anthropomorphic conditions of knowledge alluded to in the fragment. Human knowledge is always formulated and/or preserved in some language, institution or ritual; practiced and upheld by one or many individuals; always in one historical moment or other and within the admittedly diffuse framework of an ever-changing but still specific social situation. All these factors are codetermining our knowledge, making it part of a fluctuating, always changing epistemic situation. We have no reason to believe that our access to our alleged 'universal human nature' would be privileged and exempt from these aporias (if aporias really is the proper word here) pertaining to all knowledge. Not even such purported universal properties as those incorporated in our bodies (and, as the case may be, our genes) can serve as anchorages, determinations and guarantees for universal validity and secure knowledge. Each claim to universal knowledge or validity is, to use Chaïm Perelman's happy phrase, in fact but an attempt more or less to convince the universal audience and, moreover, a universal audience, of one's own choosing and constitution.[5]

Applying this line of reasoning to Protagoras's dictum, we can see that what is at stake is not, at least not directly, the determination of what kind of human or human nature the fragment is advocating. No, instead of starting only with the question, 'What man – individual or universal – is the measure of all things?', it would be wise also to ask: '*What* is the measure of man?' Doing this, it is of importance to highlight an ambiguity in the fragment: if man is the measure of all things, two coexisting, commensurable and interrelated possibilities are open:

The first possibility is that man as individual being or as 'generic nature', or both, really *is* the measure, the scale against which reality

is measured. Then the question 'What is the measure of man?' would address what qualities and measuring powers are specific to man as an embodied being, measuring his world in feet, fathoms and stone throws as well as in inches, centimetres, kilos, pounds and tons. To answer this version of the question of man the measure, we would have to take for granted the knowledge presented about ourselves and our bodily capacities in biology, physiology, neurology, cognitive science and so forth, and use this knowledge as a basis for our deliberations. Such an approach would differ from the Kantian one, just discussed, in being completely immanent to our human epistemic conditions and, therefore, also immersed in the aporias hinted at above – for instance that knowledge, be it almost entirely experiential, still is always conceived in some specific human language or system of conceptions and is being produced, upheld or created within some kind of human practice or discipline. This leads us to the second possibility.

This possibility – that it is man himself, *using* some kind of standard or measure, who *does* the measuring – does not seem to have been explored in the literature relating to the interpretation of Protagoras's words.[6] I find this to be a bit odd, since, in a specific way, this question must in every possible sense be primary to the question of the nature of man. According to Protagoras it is the measuring that decides whether something *is* or is not, and *what* it is or is not. So let us look at how man can go about this measuring.

The obvious place to start such an investigation is with the discussion of the wine, Plato's famous example (*Theaetetus*, 159c). That is, the wine that is sweet if you are healthy, but bitter if you are sick, and hence – according to Plato's interpretation of Protagoras – would be both sweet and bitter at the same time. In this connection, this very example implicitly presupposes that we already somehow *know* how to discern the wine from other liquids (as well as from anything else, for that matter). Moreover, it likewise presupposes as given the conceptual categories 'sweet', 'bitter' and so on. Consequently, when Plato criticizes Protagoras for paradoxically claiming that it is true that the wine is sweet and bitter at the same time, he does so from within a world that, in some way common to them both, has already been 'measured' by us humans. The very language that they use to deliberate, as well as the experiences that they are referring to, are the products of human creation. The language and the concepts are necessary for there to be any experience at all, let alone for claiming that there is a contradiction involved in stating that the wine is bitter and sweet at the same time.[7] Every concept, every category, is irredeemably human, and neither Plato

nor anyone else can do without them. This is, in fact, the core meaning of the anthropomorphic conditions of knowledge, the core meaning of talking about *human* knowledge and of a *human* world (as opposed to world and objects, *tout court*). And if one does not want to follow the Kantian way and suppose that *every* form and category is already defined and waiting to be used inside our minds (an assumption that may appear rather fanciful), then one has to explain these pre-existing measures, these words and images in which we think, act and talk in other ways.

Then, if one does not want to take sides with Plato and agree that according to Protagoras it is the pre-symbolic (or pre-linguistic) impressions of each individual human being that are the measure of all things and, on the other hand, one does not want to postulate a common human nature to make sure that we all perceive, relate to and understand our world and our fellow men in the same way (or, at least, to make sure that there is such a possibility) – what remains? What could be the measure of man?

An answer that probably would have been acceptable even for the historical Protagoras is this: *Logos* is the measure of man – and this, again, in a double sense: *logos* as being *in the possession of* man, as well as man *as being possessed by logos*.

The suggestion is close to the one offered by Cynthia Farrar in her 1988 work, *The origins of democratic thinking*. In her reconstruction of what she takes to be the real teachings of Protagoras, Farrar comes near to the view that is advocated here. Farrar writes: 'For Protagoras, man the measurer is both what we would call a "sensing" and a "judging" being, and his standards are his own – but not merely his immediate – experience'.[8]

But Farrar never directly poses the question of how experiences can be experiences *for* a human being and, hence, she does not confront the problem of how we are able to have experiences in the first place. She remains, in this respect and despite her efforts to disentangle Protagoras from the Platonic-Aristotelian interpretations, too individualistic and too subject-orientated.

Why? Because Farrar does not really address the possibility that Protagoras might be interpreted as saying something like this: *Between the bodily commotion of individuals and the purported human nature common to all men, we find logos as a mediator, shaper and tool. Neither uniquely individual nor equal for all, logos serves as the cement holding humans together. Everyone has his or her own logos, still logos is the property of all men. Logos is perhaps the most important tool we have for chiselling*

out our nature – our own as well as the world's – and at the same time it is through and in (the doxa produced by) logos that we are chiselled out, formed as human beings. In and through logos we give names and images to our sensations, perceptions and experiences so that we can speak and think about them; logos is our guide when we act in and upon the world. At the same time logos and doxa [consitute] something (that is not thing-like at all) that we are born into and formed by in and through habits and rituals, and that we in our turn shape and reshape; logos lets us distinguish between true and false, between serious talk and nonsense, between what is sensible [and] what is foolish, between what is real and what is not – logos is what guarantees our humanity.

Here, of course, it is essential to remember that the significance of the antique term *logos* – as I hope the multiple determinations just offered have made clear – is not only speech or language. In the broad sense that is evoked here, *logos* includes not only the possible *discursive* measurements that man can perform, but also the capacity to perceive the world and to act in purposeful ways in and upon the world. In short, *logos* is an essential component in human behaviour of all kinds – in dealing with words as well as with things. And this is an important point to stress, since I am not suggesting that the human *logos* only manifests itself in speech and thinking – our bodily existence in the world irreducibly incorporates *logos* as acting as well as thinking, perceiving and speaking. These aspects of our being human in the world are not clearly distinguishable. We would not be able to act purposefully (except perhaps in a very minimal, 'behaviouristic' and reactive way) without thinking and planning; and thinking and planning presuppose at least some linguistic capacities as well as an ability to make relevant distinctions in 'the stream of experience'. This ability to conceptualize is, in a minimal sense, incorporated in our biological constitution but mainly handed down to us through our different cultural practices and traditions, among which language is one of the most important; and to make use of language is, evidently, to act in the world, and so on. The list of dynamic interconnections among acting, thinking and speaking is virtually endless.

In spite of herself, Farrar is thus being too influenced by Plato's individualistic interpretation to see that even our very experiences, as unique, specific experiences, presuppose the collective symbolic forms or social imaginary significations which are handed down to us through *logos* – taken in the broad sense advocated here – and *doxa*.

Taking all this into account, I believe we ought to follow Schiappa's suggestion and retranslate Protagoras' dictum as follows: 'Of everything and anything the measure [truly is] human(ity): of that which is, that it is the case; of that which is not, that it is not the case'.[9] However, we should not stop there. We could go even further and claim that a more congenial, even though perhaps not as philologically correct translation, would be the following, putting emphasis on the role and importance of *logos*: 'Through *logos* humanity truly is the measure of everything. Only that which can be experienced as something is, and that which can not be thus experienced is not'.

Nevertheless, if we accept that *logos* in this wide sense is the measure by which each man is formed to become human, and through which each man (as well as each society and culture) forms himself and his point of view, it is of paramount importance to understand something about how this shaping occurs. To do this we must turn to *logos* as embodied in our practices, habits, symbolic forms and symbolic social imaginary signification. That is, we must turn to *doxa*.

Doxa – a first approximation

Briefly put, *doxa* is the product of men's measurements. It is what our *logos*[10] presents to us as evident, as knowledge of *the* world, of our nature, of values and politics, of what can and cannot be done, of good and bad, of right and wrong, of the possible and the impossible. This connection between, and interdependence of, the two terms, *logos* and *doxa*, is not spurious or just something that I postulate. It is, as is well known, theorized through and through within the field of rhetoric.

Whereas ancient philosophy, at least in its different Platonic versions, struggled to find true knowledge (*episteme*) and an objective reality independent of man, ancient rhetoric saw knowledge as inseparably linked with and incorporated in *doxa* – that is, roughly, what is held to be true (sometimes termed *endoxa*), what is believed and what is taken for granted within a smaller or larger group of people. Unlike *episteme*, *doxa* was not thought to reveal reality as it is in itself, but reality as it appears to us humans. This implies, among other things, that *doxic* reality is a procedural reality in constant motion. It is a reality that is not always uniform or free of tensions and contradiction. It is dependent on, and even produced by, us human beings. In studying the practice and the treatises of rhetoric, we learn that *doxic* knowledge presents us with an eminently human world, since it is through *logos* that humans produce and shape the *doxa* that presents the world just as it appears to us. It is

through the ever already existing human *doxa*, through participating in its practices as well as thinking in its terms, that our individual as well as collective *logos* is shaped.[11]

Subsequently, if we accept that *logos* basically is the measure of man, we also have to acknowledge that it is, to a large extent, passed on to each and every one of us in the form of *doxa*. In fact, *logos* and *doxa* are complementary concepts, rather like producing and being produced, involved in a constant switching of positions, always dependent on and always influencing one another. But how are we to understand this relation, or better: these multiple, ever-fluctuating relations? How are we measured, and how do we measure our world and our existence? In short: What is *doxa*, and how does it introduce *us* to *our* measuring *logos*? To answer these multilayered questions a multiple strategy is called for. I will leave Protagoras and his times and turn to more contemporary thinkers, such as the sociologist Pierre Bourdieu and the comparative epistemology of the microbiologist Ludwik Fleck. I am going to call on Bourdieu to emphasize the social and political aspect of *doxa*, underlining what I have already tried to argue: *Doxa* is something else and more than a simple opposite to Plato's *episteme*. It is always connected to practice as well as to what I would like to call 'informative habits'.

Specifying *doxa* II – Bourdieu

We find Bourdieu among contemporary scholars who have given great attention to *doxa* and to the possibilities of *doxic* thinking.[12] *Doxa* is perhaps not among the concepts that one usually associates with his theory – such as social field, habitus, symbolic dominance and social or symbolic capital. Nevertheless, it constitutes a central component of his thinking. He uses the term to designate patterns of thought, habits of speech, ways of being, walking, dressing and so forth that are so entrenched that they seem to be unavoidable, natural and 'going-without-saying' within a certain social field, or within a certain social group. According to Bourdieu, *doxa* is that which is never questioned simply because nobody in the group ever thinks about questioning it. In a conversation with Terry Eagleton, published as 'Doxa and Common Life', Bourdieu expands on this topic. Following a question from Eagleton – 'What room does your doctrine leave for dissent, criticism and opposition?' – he replies:

> That is a very good question. Even in the most economistic tradition that we know, namely Marxism, I think the capacity for resistance, as a capacity of consciousness, was overestimated. I fear that what I

> have to say is shocking for the self-confidence of intellectuals, especially for the more generous, left-wing intellectuals. I am seen as pessimistic, as discouraging the people and so on. But I think it is better to know the truth; and the fact is that when we see with our own eyes people living in poor conditions – such as existed, when I was a young scholar, among the local proletariat, the workers in factories – it is clear that they are prepared to accept much more than we would have believed. That was a very strong experience for me: they put up with a great deal, *and this is what I mean by doxa – that there are many things people accept without knowing*. I will give you an example taken from our society. When you ask a sample of individuals what are the main factors of achievement at school, the further you go down the social scale the more they believe in natural talent or gifts – the more they believe that those who are successful are naturally endowed with intellectual capacities. And the more they accept their own exclusion, the more they believe they are stupid, the more they say 'Yes, I was no good at English, I was no good at French, I was no good at mathematics.' Now that is a fact – in my view it is an appalling fact – one that intellectuals don't like to accept, but which they must accept. It doesn't mean that the dominated individuals tolerate everything; but they assent to much more than we believe and much more than they know. It is a formidable mechanism, like the imperial system – *a wonderful instrument of ideology, much bigger and more powerful than television or propaganda*. That is the main experience I want to convey. What you say about the capacity for dissent is very important; this indeed exists, but not where we look for it – it takes another form. [emphasis mine][13]

This lengthy quote has been included because it gives an idea of how Bourdieu argues in the matter. It also emphasizes the social-political aspect of the notion of *doxa* – a *doxa* is never just a question of knowing or organising knowledge, it is always a distribution of social power and powerlessness that presents itself as the natural order of things.

Bourdieu's treatment of *doxa* and its functions is scattered throughout his work and he did not (to my knowledge) collect his remarks into a more systematic, general account. Thus, to summarize what he has to say about *doxa*, one has to improvise and search his texts for telling passages, like the one just quoted and the following, where he writes about the effects of the journalistic *doxa*:

> Yet it remains true that, like other fields, the journalistic field is based upon a *set of shared assumptions and beliefs*, which *reach*

> *beyond* differences in position and opinion. These assumptions operate within a *particular set of mental categories*; they reside in a characteristic relationship to language, and are visible in everything implied by a formulation such as 'it's just *made* for television'. These are *what supply the principle that determines* what journalists select both within social reality and among symbolic productions as a whole. There is no discourse (scientific analysis, political manifesto, whatever) and no action, (demonstration, strike) that doesn't have to face this trial of journalistic selection in order to catch the public eye. The effect is *censorship*, which journalists can *practice without even being aware of it*. They retain only the things capable of *interesting* them and 'keeping their attention', which means *things that fit their categories and mental grid*; and they reject as insignificant or remain indifferent to symbolic expressions that ought to reach the population as a whole. [emphasis mine][14]

The point here is that what goes for journalists goes, mutatis mutandis, for all of us. Every social domain that is more or less delimited has its own *doxa* – scholars as well as businessmen, politicians as well as artists. This implies that there is an agreement among the agents in each specific domain about certain facts, values and evidences.[15] Sometimes, Bourdieu calls this kind of concord *objective agreement* – 'objective' because it is not necessarily lived as an agreement by the agents themselves. In effect, fierce struggles are quite common within the fields – struggles that are made possible only through an objective agreement about what is at stake and what is worth fighting for. That you somehow feel that a certain question is interesting and merits discussion already implies that you, consciously or (more often) unconsciously, have acquired and accepted, as Bourdieu puts it, a 'specific *doxa,* a set of inseparably cognitive and evaluative presuppositions ...'.[16]

Further, the prevailing *doxa* in a field is all but invisible for the agents within the very same field. This becomes more comprehensible if one considers that to acquire a *doxa* is to acquire a way of conceiving the world and one's fellow humans. A *doxa* shapes our world view long before we are in a position to reflect upon and, perhaps, try to transform it. It is for this very reason that even conscientious, serious journalists will practice the *censorship* that Bourdieu talks about in the quote. They simply represent the world as it presents itself to them, and the censorship they perform is therefore not necessarily a result of an active, conscious choice. Thus, one of Bourdieu's major interests in

investigating the journalistic field is to make this implicit censorship explicit and thereby make way for a possible critique and change of some aspects of the journalistic *doxa*.

However, society is not made up of sharply distinguished and separated domains or fields that do not communicate with or influence each other. On the contrary, a constant exchange of influences and interactions take place between the different parts of the social field. One result of this interaction is that each individual – *using her specific logos,* linked to her specific individual and social position – forms an opinion about what 'everybody else' thinks and knows, likes or dislikes; that is, an opinion about what *doxa* is dominating in society at large, an opinion about what philosophers are prone to call *common sense*.

Understood in this way, *common sense* becomes a designation of almost everything 'holding together' a certain group – from what facts an adult should know and accept as true, how one is to behave or dress in this or that situation, to what opinions are correct to hold at a certain time, in a certain context or situation. This common *doxa* takes on the role of a (in a very wide sense) common conceptual framework or a norm that you do not have to subject yourself to, but that you always have to relate to in one way or another. Each and every one of us can, from our specific positions in society, find reasons to question and revise what presents itself to us as commonly accepted. Nevertheless, we cannot avoid relating to it, in some way or another, when we act or think.

Exactly what is included in the *common sense* of a group or field – not to mention of a society – is hard to say. This is partly due to its constant variation (in time and depending on your social, educational and individual perspective); partly because it is hard to delimit and does not hold together in any obvious way; and partly because it is so evident, so 'given' that it has become all but invisible – at least for those who are immersed in and used to the values, opinions, beliefs and traditions of the society. Bourdieu explains in *Pascalian Meditations*:

> It is because we are implicated in the world that there is implicit content in what we think and say about it. ... [O]nly the illusion of the omnipotence of thought could lead one to believe that the most radical doubt is capable of suspending the presuppositions, linked to our various affiliations, memberships, implications, that we engage in our thoughts. The unconscious is history – the collective history

> that has produced our categories of thought, and the individual history through which they have been inculcated in us. It is, for example, from the social history of educational institutions ... and from the ... history of our singular relationship to these institutions, that we can expect some real revelations about the objective and subjective structures (classifications, hierarchies, problematics, etcetera) that always, in spite of ourselves, orient our thought.[17]

One way of interpreting Bourdieu is that he actually says that our *logos* is given to us through our being shaped by the prevailing *doxa*, that the categories, concepts and practices at our disposal are not free subjective constructs nor given to us by an unchanging nature or reality. They are, in fact, what shapes us and what we in turn reshape, in a constant *va et vient* between the subjective and the objective, the individual and the social, the present and history, the producing and the produced.

Let me conclude by highlighting what I, from a doxological point of view, find to be the most significant aspects of this combination of a Protagorean *logos* with Bourdieu's conception of *doxa*:

A *doxa* is not only made up of discursive knowledge. It includes the whole sphere of human action and thinking, from facts to ideologies, from how you dress to how you speak.

A *doxa* is hard to 'see' or to articulate for those who live with (or are surrounded by) it. *Doxa* always hides behind the mask of evidence and reality.

A *doxa* is not something external in relation to the subjects that support it. *Doxa* shapes and to a certain extent determines how and what the subjects think and perceive – it *informs* the subject's *logos*.

Every domain in society has its own more or less specific *doxa*, from the most specialized disciplinary ones to the most common, unspecified and fluctuating *doxa*: *common sense* (that is, 'common' in the sense of being accessible, or at least of being an unavoidable reference point, for each member of a community).

Finally, a *doxa* is always also part of the distribution of power within the culture, society, discipline or group that supports it as well as being shaped and delimited by it.

How can this notion of *doxa* and *doxic* thinking, these arguments about *logos*, texts, images and perception help us in understanding the study of Palaeolithic mural cave paintings, and the attempts to explain and understand these paintings? The next section will make

a first attempt at addressing these questions. The time has come to leave the fictional Platonic cave, but not the Platonic qualms. We will enter some real palpable caves where I will try to put into motion not only the always already pre-existing ways of seeing but also a doxological reasoning, trying to make *use* of what has hitherto been only *stated*.

4
Caves

The beginnings of a discipline

According to recent estimates the practice of painting and engraving walls in remote galleries of uninhabited caves in what is now southern France and northern Spain went on for more than 20,000 years. That is roughly in the period between 35,000 and 10,000 years before present (BP).[1] Despite the early efforts at establishing a chronology of the caves based on the increasing complexity and style of the paintings, heavily dependent as they were on common prejudices relating to the direction of history and evolution, there now appears to be general agreement that the oldest cave known to us thus far[2] – the Chauvet cave in Ardèche – is by no means the most 'primitive' when it comes to painting techniques, rendering of perspective and disposition of the paintings and the engravings.[3] Thus, we are dealing with a cultural practice that has survived dramatic climatic changes and lasted (or was constantly reinvented) for a period so long that it is hardly conceivable for us: How could it have been sustained? Why did it not change more than it did? Why this relative constancy of motifs? And, of course: Why paint anything as deep under a mountain as is humanly possible?

Despite the genuine interest these questions may evoke in their own right – and do evoke, at least for me – my main purpose in raising them here is more general and connected to the doxological interest in how human creation comes about. The question of mural cave art has been intimately linked to questions of creation ever since its discovery in the late nineteenth century. To the creation of art (and sometimes even of European art), of course, but also to the creation of humanity and the

interconnection between the two. In 1955 Georges Bataille wrote, in his book on the Lascaux cave:

> It is about 'the man of Lascaux' that we may for sure, and for the first time, finally say that in doing art, he was like us, that evidently he was our equal.[4]

In writing this, Bataille may be seen as representative of a certain, important and still-dominant strand in Western thought. The question of the creation of cave art is still obviously superimposed with many other questions relating to the construction, production and creation of many other 'entities' – of art, of man, of mankind, of us modern men, and so forth. In this respect the creation of mural cave art – that is, *both* of the engravings and paintings in the caves and of the much more recent concept of mural cave art and the discipline dedicated to studying and explaining it – is, in ways that would need to be described and analysed in detail, connected to the creation of a European identity, founded deep in the prehistoric soil.

The history of the ways in which the scientific object, 'Palaeolithic cave art', was created and recreated all through the twentieth century is nothing short of a catalogue of various and often conflicting theoretical approaches within the human sciences. From the early moments of Abbé Breuil and his somewhat Frazerian approach to the paintings, through André Leroi-Gourhan and Anette Lamning-Emperaire and their structuralistic 'reading' of the caves, up to David Lewis-Williams and Jean Clottes and their contemporary (and severely contested) attempt to make a case for shamanism, this history offers a possibility to anchor some of the more theoretical, doxological notions of how creation is *conditioned*, *supported* and *restricted* by its epistemic as well as its socio-historical context.

Cave 'art'?

There is a tricky terminological and conceptual problem at stake here that has to be dealt with straightaway, and to which I will return many times in this book: When we call what we find in the Palaeolithic caves 'art', we say far more than most of us would want or for that matter are entitled to say, given what we know and can know about the 'art' of the caves. For to call the markings found on the walls of the caves 'art' is not to make a neutral description of what

kind of things they are. It is, one may argue, to inscribe them into a large but nevertheless specific (Western) aesthetic discourse, formed and institutionalized during the eighteenth and nineteenth centuries, which in many often barely discernable ways will limit and guide our perception and understanding of the markings on the walls. Or, as philosopher Larry Shiner so eloquently puts it:

> The modern system of art is not an essence or fate but something we have made. Art as we have generally understood it is a European invention barely two hundred years old. It was proceeded by a broader, more utilitarian system of art that lasted over two thousand years, and it is likely to be followed by a third system of the arts.[5]

Consequently, if one accepts this point of view, then using the term 'art' in connection with what we find on the walls of the caves is rather like deciding already from the start that the duck-rabbit *really* is a duck, and thus refusing the validity of perceiving it as a rabbit: 'Yes, you may perhaps think of it as a rabbit, but we all know it is a duck'.

From a doxological point of view, the usage of a term or concept is never 'innocent' or neutral.[6] Archaeologist Richard Bradley provides a telling example. In a discussion of how the distinction between fine and applied art in nineteenth-century archaeology was underpinned by the use of language, Bradley points out that 'the separate chambers inside the decorated caves were often described as "galleries", as if they were really the equivalent of a Western art museum'.[7]

Taking my cue from ideas that were central for the early Jacques Derrida, I do not naively believe that replacing an old, entrenched concept or term with a new one – through a new definition, by adapting an old word to a new usage, or by paraphrasing and so forth – will resolve the issue and leave us in control of the new term and the new sense we are aspiring to. Every new term, every new definition and paraphrase, have to insert themselves in the already existing and ever-changing grid of terms, concepts and practices that, to a much larger extent than is generally acknowledged, condition sense and possible usage. But – and I would like to emphasize this – this conditioning is not to be understood as a determination. It does in fact leave room for what Cornelius Castoriadis calls radical imagination, or what Derrida calls *différance* (with the famous 'a'), and hence for creation of new concepts.[8] What it does *not* leave room for is an explanation of the meaning of a term, concept or an artefact *only* in terms of the intentions of the users, or *only* in terms of definitions (be they of the stipulative, the usage,

the ostentative or any other kind), or *only* in terms of social usage – *that* would be considered an unfounded reduction from a doxological viewpoint.[9]

What is it then that we do more precisely when we call the drawings, the etchings, the carvings, the macaronis and the figures we find on the walls of the caves art? Are we applying a concept and a term[10] that represent some kind of 'closest match' (see below, 'Seeing what is there – bodily conditions') to what we are already familiar with, or are we recording similarities that are already out there in the world for us to pick up, or are we creating an object that was not there before, or all of this at once?

The usage of the term 'art' became a contested issue in the field of cave-art studies during the 1980s.[11] In the preface (from 1988) to the first edition of *Journey through the Ice Age* archaeologists Paul Bahn and Jan Vertut wrote:

> The term 'art' is rapidly losing favour among those researching the Palaeolithic period, since it presupposes an aesthetic function and lumps together a wide range of objects and types of image-making spanning twenty five millennia; other vaguer terms – 'pictures', 'icongraphy', 'images', pictograms/ideograms', 'symbolic graphism' or 'decoration' are now preferred.[12]

Still the term 'art', even though it is constantly contested, seems to retain its position within the field. Even Bahn and Vertut themselves use it in their book, with the caveat that it is 'only retained as a convenient blanket-term for the decoration of objects, rocks and cave walls, whatever its function or motivation may have been'. But as I just argued, referring to Derrida, it is not really possible to control what a term means only by this kind of declaration. The change in meaning has to find its footing in a change in usage, rather than in intentions.

That being said, within the field there seem to be at least two different, and opposite, views on this matter. As the interest of this debate hinges on details in the different ways of approaching the topic, and in order to give each position a fair presentation, they will be rendered through quite lengthy quotes. This will also make it possible to pinpoint the places where a doxological view would differ from both.

The first position may be represented by the archaeologist Margret Conkey and anthropologist Olga Soffer. In the introduction to a book with the telling title, *Beyond Art: Pleistocene Image and Symbol*, they spell out their argument concerning the use of the term and the

concept 'art' in connection to what was found, and what we still find, in the caves:

> Although most of us would agree that many of these images are indeed aesthetically pleasing, to call them 'art' is both misleading and limiting. There are two assumptions behind the term 'art' that are particularly troublesome. First, as defined in the past century, art is a cultural phenomenon that is assumed to function in what we recognize and even carve off separately as the aesthetic sphere. There are longstanding debates, even within the Western intellectual and cultural traditions about the definition(s) of 'art'. This aesthetic function is something that we cannot assume to have been the case in prehistory. ... The equally troubling second assumption behind the term 'art' as applied to these very early visual cultures is this idea that it is somehow transcendent and therefore provides us with transcendent values. To claim Lascaux, for example, as the 'first masterpiece' of human art history reveals more about our cultural categories and constructions than about the contexts of prehistoric social action within which the production of such imagery as Lascaux took place and had meaning.[13]

I do agree that we should avoid a naïve projection of our own contemporary categories onto the objects we think of as belonging to history or prehistory. To claim, like Bataille and many others, that art in our sense was 'born' in Lascaux or any other cave, just seems to be plain wrong. Doxologically speaking, there are no transcendental values hidden in the signs and symbols in the caves, nor are they vehicles transporting sense through the ages – they are standing possibilities for us to interpret and try to make sense of. This is conceptual work that has nothing to do with recovering hidden meanings, but everything to do with our semiotic, discursive, hermeneutic, scientific and so forth, practices and abilities. So, what are our alternatives? We have to remember Derrida's warning that the step outside metaphysics, that is, out of our Western tradition with all its terms and concepts, is by no means easy to effectuate, if possible at all. But, as he also says: not all ways of giving in to this state of affairs are equally valid – it is a question of the critical responsibility of one's own discourse, a problem related to an economy of language and of discursive strategy.[14] And one possible strategy here would be, as hinted at by Bahn and Vertut already in 1988, to keep using the term art, always keeping in mind the historical overload of the sense it carries, and in different strategic ways try to counteract the

senses that appear most threatening. In short, we are in a position in which need to be *bricoleurs* and, at the same time, realize that we never can aspire to become *engineers* no matter how hard we try. In borrowing and transforming Claude Lévi-Strauss terms, Derrida shows that we have in fact always been *bricoleurs*. Moreover, he shows that the *engineer* is but a myth produced by the *bricoleur*:

> If one calls *bricolage* the necessity of borrowing one's concept from the text of a heritage which is more or less coherent or ruined, it must be said that every discourse is *bricoleur.* The engineer, whom Lévi-Strauss opposes to the *bricoleur,* should be one to construct the totality of his language, syntax, and lexicon. In this sense the engineer is a myth. ... The notion of the engineer who supposedly breaks with all forms of *bricolage* is therefore a theological idea; and since Lévi-Strauss tells us elsewhere that *bricolage* is mytho-poetic, the odds are that the engineer is a myth produced by the *bricoleur.*[15]

Derrida's notion of *bricolage* thus includes situatedness, strategy and creative productivity when it comes to making sense in and for the human world. Doxologically speaking, *bricolage* appears as a good method for dealing with conceptual and terminological aporias.[16] And as Castoriadis would have said: We are always already downstream, and that is where we have to start.

The second position relating to the usage of the term 'art' within cave-art studies is articulated in the work of cave art specialist Michel Lorblanchet. In opposition to, among others, Conkey (the allusions in the following quote are to one of Conkey's earlier articles), he claims that even though we are well advised to be wary when employing the term 'art' to avoid inscribing what we find in the caves in a too narrow, aesthetic paradigm,

> ... the term 'art' is in no way reducing. It does not imply a 'monolithic interpretation', nor a semantic classification in 'one and the same category' since it does not, in fact, imply any particular interpretation at all. It is just the expression of the freedom and sensibility of men facing the productions of the past, but freedom does not imply ignorance: In recognising the historicity of the significations and the usages of the rock images [des images rupestres], we know that we are contemplating prehistoric works with a different regard than that of our faraway predecessors.[17]

Lorblanchet is trying to distance himself from what he considers an all too narrow aesthetic understanding of the term 'art'. Instead he invokes the broader sense of 'art' as 'artefact' in general, and claims that even though Conkey and others are right in warning us against the possible consequences of the usage of 'art' when designating what we find in the caves, these consequences are by no means necessary or unavoidable.

Lorblanchet quite rightly points out that 'art' does not imply a 'monolithic interpretation', nor a classification in 'one and the same category', but at the same time he underestimates the danger that Conkey points out. In reducing this danger to just an expression of the freedom and sensibility of men facing the productions of the past he is ignoring that the very act of calling the new findings in the caves 'art' *in fact* inscribes them into the aesthetic sphere of the early twentieth century. The archaeological discoveries in the caves in the beginning of the last century were treated in surveys of art history and, thus, integrated into a realm in which notions of beauty, disinterest and of eternal yearning for the aesthetically pleasing were central. This aesthetical inscription is still upheld, both within the field of cave-art studies (examples follow below) and in the general doxa concerning art and cave art. A telling trace of this general doxa is found printed on a postcard depicting a bull from Lascaux. It says, first in French, followed by an English translation:

> 'Nothing better has been painted since', declared Picasso of the paintings in the cave at Lascaux, which date back to the Aurignacian period (Upper Palaeolithic, 15,000 BC). By the light of oil lamps, no brighter than candlelight, men depicted the animal world around them, perhaps as a part of an initiation rite. The careful way that pigments were projected onto the rock, and the usage of its surface to render the animals' rough coats, suggest that these hunters mastered artistic technique. Often referred to as the prehistoric Sistine Chapel, these cave paintings are the beginning of art, such is the emotion they inspire.[18]

As we will see, this text condenses many themes and opinions that are still current in the field. Consequently, Lorblanchet, in his emphasis on the 'freedom and sensibility' of the first archaeologist's choice to use the term 'art' to designate the paintings in the caves seems to be underestimating – at least in the 1991 text just quoted – the aesthetic lure of

the term, and putting too much faith in the transparency of intentions behind this choice.

Lorblanchet returns to the topic some years later – in the book *La Naissance de l'art* (1999) – and, though he has listened to what his critics had to say, he basically maintains the same position, even stating his own case yet more forcefully. After contending that however we may define 'art' it will 'generally contain a notion of "beauty" and "pleasure"' that is dominating in 'contemporary art that has lost its religious content', he accepts that 'one ought to be careful with modern aesthetical discourse'.[19] The goal of cave-art studies, he concludes, should be 'to recreate the perception and usage of the images of the peoples in the past'. In the next paragraph, he writes:

> Despite the utility of the invitations to be careful when using the word 'art' about the productions of faraway periods, let us be frank and say clearly that the debate brought up by the Anglo-Saxon school [i.e., Conkey et al] is a false debate.
>
> The notion of 'art' certainly has a history. Its definition has often varied during the past. Nevertheless, in spite of these variations, art has for a long time had a utilitarian function, most often a religious one, but at the same time it has always had an aesthetic content. It would be a simplification and entirely false to deprive the man of origin of an aesthetic sense. It is even probable that art is born from the pleasure of perceiving forms and colours and that it was for hundreds of millennia essentially an aesthetic play before becoming a religious activity for some tens of millennia only to, recently, perform a sort of return to the sources.[20]

Lorblanchet goes on to discuss the relation that according to him never was an opposition between the aesthetic and the utilitarian function. Beauty and efficiency are and have always been mutually supportive. The beauty of Palaeolithic art is first and foremost functional, Lorblanchet concludes, before providing us with the definition of art that he intends to be using in his book:

> [T]he original works of art are defined as 'the mind's marks on nature', as works that seem to go beyond the needs of immediate survival to express, on the contrary, an aesthetic kind of care, theoretically linked to playful or symbolic behaviour, without it being possible to always separate or even demonstrate them. Therefore we

> will consider as manifestations of art in its beginning man's appropriation of nature's strange productions and the human creations that, no matter their aim or content (that we generally ignore), imply a play of materials, colours and forms (that we perceive).
>
> We will of course be wary of projecting the aesthetic tastes of our time onto the productions of our very far away ancestors.[21]

I find Lorblanchet to be more convincing in his 1999 discussion than he was before – especially when it comes to his attempt to provide a workable definition of art for the purposes of his book. But I do not agree that the debate raised by Conkey and others is a false debate – far from it. And when Lorblanchet talks about the aesthetic sense of our forbears as something given, I am even more reluctant to follow. He does not seem to notice that his own usage of the category of aesthetic (aesthetic content, aesthetic sense) does exactly what Conkey warned against – it projects a specific way of conceptualizing, a specific concept, onto an object out of the pre–eighteenth-century past. But then again, as noted above, how are we to avoid this kind of projection? We have the terms and concepts we have, the senses of which tend to wrest themselves out of our grip and escape our intentions.

It is, as Derrida said, a problem of critical awareness, economy and strategy, rather than a problem of definitions or 'real' meaning. And even though the usage of 'art' to designate the traces found in the caves is in many and deeply entrenched ways connected to the mimetic curse that haunts cave-art studies, I find Lorblanchet's attempt at a definition to be a good strategy to counteract the pure aesthetic sense of art that Conkey warns against. I doubt, however, that he would agree and concede that this is what he is trying to achieve. All in all, it seems that we have to accept that people – laymen as well as scientists – will continue to talk about cave art for a long time yet. There is in fact, as Lorblanchet also points out, no word to replace the term art, '[T]hat word is still to be invented!' he says, [22] – we are stuck with it, for better or for worse.

So, since this parlance is solidly established it would be ridiculous to try to circumvent it. Therefore, I will prolong the strategy adopted by Bahn and Vertut and continue to speak of cave art, Palaeolithic art, and Palaeolithic mural art both with and without quotes, hoping to somewhat transform and problematize the sense of the term as I go along through strategic moves and critical attentiveness. We must not forget Shiner's reminder that the modern system of art is not an essence or fate but something we have made – and, hence, can be yet transformed and remade in many ways.

The creation of cave art – Altamira and onwards

When the Spanish landowner and amateur archaeologist Don Marcelino Sanz de Sautuola decides in 1880 to publish his recent discovery of paintings in the ceiling of the cave that was soon to be known as Altamira, he initiates a creation of a new concept in archaeology: 'Palaeolithic mural cave art' – that is 'art' that is executed directly on the walls, or as the case may be, the floor of a cave, that is, non-portable 'art'. (Portable objects from the Palaeolithic period with engravings, decorations or even paintings were already known and studied by the archaeologists of the time. The French terms for these two 'kinds' of 'art', often used in the literature on the painted caves, are *art pariétal*, mural art, and *art mobilier*, portable art.)[23]

As seems to be the case with most radical creations, this conceptual invention was not easily integrated by the scientists of Sanz de Sautuola's time.[24] In fact, the antiquity of the paintings described by Sanz de Sautuola was immediately questioned. As a consequence of a heated debate at the 1880 Congress of Anthropology in Lisbon, one of the leading French scholars in the field at the time, Émile Cartailhac, sent a certain Edouard Harlé to examine the cave. His conclusions were unambiguous: 'I believe that I have shown that the beautiful paintings in the ceiling are very recent. It seems probable that they have been made in the interval between Mr. de Sautuola's two first visits to the cave, that is between 1875 and 1879'.[25] The reasons by which Harlé supports his conclusion are worth noticing: 'All trace of smoke coming from the fireplaces having disappeared', he says, 'why then should the paintings remain? Since the light of day does not reach the emplacement of the pictures, and since their making must have taken a certain time, they could only have been made in an epoch when sophisticated artificial lighting could be provided. Moreover, the paint comes off easily, it covers several stalactites, and when examined proves to be the product of learned processes. ... But above all, unlike the very realistic hind, the aurochs that the maker has taken the trouble to paint do only partially represent the traits of this animal; therefore he has never seen them'.[26]

Apart for the obvious fact that Harlé's arguments reflect the scientific prejudices of his time concerning the supposed technical and artistic capacities of our Palaeolithic ancestors, his argument about the only partly realistic representation of the aurochs is particularly telling. It is, in fact, a perfect example of the Platonic, causal conception of realistic images – adhering to the formula 'not realistic = not caused by a real

Illustration 4.1 Cave of Altamira, Spain. Relevé of the ceiling. Published by M. Sanz de Sautuola in 1880. Retrieved from http://commons.wikimedia.org/wiki/File:Altamira-1880.jpg 22 February 2012

object' – which is one aspect of the lingering idea I call the mimetic curse of cave art. Still today, this notion of realism and of the relation between the images in the caves and the world outside permeates the common, and to some extent also the scientific doxa concerning cave art. A recent example comes from anthropologist Christine Desdemaines-Hugon. In her book, *Stepping Stones*, published in 2010, she echoes Harlé in an interesting way, arguing for the authenticity of the painted mammoths in the Rouffignac cave:

> Another convincing argument is the detail with which these prehistoric animals are depicted. ... The mammoths have certain anatomical characteristics that only someone who had seen them could know about, such as the flap of skin that protects the anus from the cold.[27]

I will return to the discussion of this topos.[28]

Harlé's report, which settled the matter as far as the scientific opinion of the 1880s was concerned, gives us a glimpse of what the archaeological thought style and doxa might have been like at the time. But it is doubtful whether the explicit arguments advanced, despite their *prima facie* solid foundation in the common sense of the time, were the only, or even the real, motivation behind the rejections of Sanz de Sautuola's findings.[29] The archaeologist Jan Bazant claims that one of the main reasons actually was the realization that the very existence of such

sophisticated works from a period so ancient considerably weakened the theory of evolution. Referring to the report by Harlé just mentioned, Bazant says that it is significant for this atmosphere that the first publication of reproductions of Palaeolithic paintings was just to show them to be fakes.[30] Richard Bradley, writing about the controversies relating to the ceiling of Altamira, takes a similar view:

> The problem for the French archaeologists was that sophisticated paintings were coming to light in caves where they were apparently associated with remains of extinct animals. This violated the principles of social evolution, for cave art showed a disquieting resemblance to the accepted conventions of nineteenth-century painting. For that reason it was difficult to accommodate these findings in a broader understanding of the past.[31]

From a doxological point of view Bradley makes an interesting observation in this connexion. The French scientists, who had adopted an evolutionary model, were much more reluctant to accept the paintings in the caves as genuinely Palaeolithic than were the 'Spanish scholars who had accepted the literal truth of the Book of Genesis'[32] – for the latter scholars, the pictures simply were no threat to their cherished doxa.[33]

It was not until the beginning of the twentieth century, following some decisive and unquestionably Palaeolithic discoveries of mural cave art – La Mouth cave in 1895, Combarelles and Font-de-Gaume caves, both in the same week in 1901 – that the scientific community generally accepted that the paintings actually dated from the Palaeolithic period. In 1902 Émile Cartailhac published a 'mea culpa' concerning the paintings in Altamira; Sanz de Sautuola's honour as a scientist was finally restored (though posthumously) and the new discipline of cave art research found its form and foundation in the works of Abbé Henri Breuil. [34] Paul Bahn and Jean Vertut write:

> On 14 August 1902, a number of pre-historians – including Émile Cartailhac – attending the Montauban Congress of the French Association for the Advancement of Science made an excursion to the Les Eyzies area and visited the decorated caves there. This marked the official recognition by science of the existence of cave art.[35]

From now on the discipline partakes in the general development of the social and human sciences, and reflects most of, if not all, its fashions and methods.

Seeing what is there

Before leaving these, the very first moments of the discipline of Palaeolithic cave-art studies, I would like to linger at length upon two rather intriguing phenomena: First, the fact that even Sanz de Sautuola's 'discovery' came rather late, considering that caves with pictures had been known and visited long before. And, second, that despite the fact that engravings and paintings on portable Palaeolithic objects were known at least from 1852 and officially accepted from around 1860,[36] Sanz de Sautuola's findings still were so hard to accept.[37] The explanation advanced by Bazant and others appears to be correct – however, there is more to be said on the matter. Bazant is quite right in focusing on the social aspects of the creation of scientific facts, but in so doing he leaves out the crucial question of perception and, most importantly, of the manifold ways in which perception and social factors intertwine.[38]

There is definitely a perceptual problem involved here, rather reminiscent of some aspects of the duck-rabbit case. The question of the authenticity of the mural cave art is not only preceded by the question of what one may see in the caves, but even more so of what one *can* see in the caves *if* one has no concept of mural cave art in the first place. Paul Bahn even talks about Sanz de Sautuola as having made a 'crucial mental leap' when he 'noticed in 1879 that the bison figures painted on the ceiling of the cave of Altamira ... were very similar in style to the images in Palaeolithic portable art'.[39]

Moreover, we must remember that the painted caves were by no means discovered in the mid or late nineteenth century. Many of them were known long before, and in many cases frequently visited. For instance, in the Niaux cave in the Pyrenees we find graffiti dating as far back as 1602. In the beginning of the nineteenth century the cave was all but plundered of its stalactites and stalagmites to be sold as souvenirs for tourists at the time.[40] The local guides, who brought the plunderers into the cavern, had obviously noticed the paintings in the now famous 'Salon Noir', since they called it 'the museum'. However, it is hardly probable that they would have thought of them as prehistoric (or even antediluvian, as it were).

As late as in 1866, even the local scholar and prehistorian Dr. Félix Garrigou was unable to see the paintings as prehistoric. He wrote in his notebook: 'There are drawings on the walls; what could that possibly be?' and forgot all about them until they were officially discovered in 1906.[41]

Illustration 4.2 Bisons from the Salon noir of the Niaux cave, replica in the Brno museum Anthropos. Retrieved from http://commons.wikimedia.org/wiki/File:Niaux,_bisons.JPG ; 15 Mars 2012

FELIX GARRIGOU ET LES PEINTURES DE LA GROTTE DE NIAUX

Source : carnets de terrain de F. Garrigou

a Le 7 avril 1866, Tarascon a Alliat (Grotte de Niaux)
La grotte en couloir de 1800 metres jusqu'au lacc. Sables, Couloir secondarire a gauche et a droite grand couloir termine par une rotonde. Parois avec droles droles de dessins bæufs et chevaux????>>

<<lE 16 juin 1866, Grotte Grande de Niaux
Dans la grande grotte de Niaux parcourue avec le guide epileptique on arrive au lac du fond qui empeche de passer.
Sables partout tres abondants.
En venant du lac vers l'entree on trouve les couloirs secondaires.
A gauche grand couloir deja visite a pente ascendante, et termine par une grande salle ronde portant de droles de dessins. Qu'est-ce que c'est que cela? Amatecurs artistes ayant dessine des anumaux. Pourquoi cela ? Deja vu avant. >>

Illustration 4.3 Quotations from Dr Garrigou's notebooks, copied and shown to the author by the local guides in Niaux. Photographed by the author 21 July 2005.

Besides Niaux, the Bédeilhac cave, also situated in the Pyrenees not far from Niaux, is probably the most renowned of the painted caves known to have been visited regularly all through the ages. It was excavated already in 1866, but it was not until 1906 that its paintings were officially authenticated.[42]

The same pattern can be seen in the lore surrounding the discovery of Altamira. According to tradition it was not Sanz de Sautuola himself who first saw the famous bison painted in the cave – even though once seen they are quite conspicuous. He was entirely focused upon excavating the floor in the mouth of the cave in search of traces of human activity, such as fireplaces, tools and remains of all kinds. It was his young daughter, Maria, who, while playing in the cave, saw the paintings and exclaimed: 'Look, Papa, oxen!' (*Mira, Papa, bueyes!*).[43] Obviously this was enough for her father to see and, more importantly, to perceive the paintings as paintings in the same vein as the decorations that he already was familiar with from portable Palaeolithic objects.

Even though the material presented here is, admittedly, meagre it nevertheless gives rise to the suspicion that it may have been harder for trained, scientific observers to perceive what they, like anyone else who looked at the walls of the caves, actually were seeing. The cave art specialist Annette Laming-Emperaire has made the same observation. She writes with some astonishment about Dr. Garrigou and the pictures in Niaux: 'These paintings, and especially those in the Salon Noir cannot elude any visitor, no matter how uninformed. But Dr. Garrigou contents himself with entering that "There are drawings on the walls; what could that possibly be?" in his notebook'.[44] The scientists appear to have had difficulties in primarily seeing and, secondarily, in conceptualizing the figures on the cave walls. Or, as the rock art specialist, John Clegg, using the example of guided tours to Australian prehistoric rock paintings, puts it:

> Without knowing what to expect it is almost impossible to see what there is. A certain familiarity with styles of pictures is necessary to see them: a guide often has to point out form in great detail before a naive onlooker can see the kangaroo at all. Once the onlookers have their 'eye in', they know what to expect, and rapidly become expert at discovering items that have not been pointed out to them. ... The processes of 'getting the eye in' involve familiarity with common natural markings on the rock, and an understanding of the representational conventions used.[45]

I am not sure that 'understanding the conventions used' really is a precondition for 'getting your eye in' – it implies too much of a reasoned, intentional figuring out of a representational scheme, and too little of the immediacy of an aspect switch, too much of an intellectualistic approach to our perceiving and too little of habituation and bodily practice. Regardless, one might claim that in the history of the discovery of cave art the scientists are, as it were, the naive ones needing to be taught what they should look for, whereas local guides and children, seemingly not suffering from well-entrenched perceptual prejudices, seem more apt at perceiving the pictures as pictures, *tout court*. Why is this so? How are we to explain this inability amongst trained scholars to see what there is to see?

To provide an answer it is time for a strategic move. We will leave the caves once more and turn directly to Ludwick Fleck, whose thoughts and terms I have evoked many times already, and to his comparative epistemology.

5
Doxa

Specifying doxa III – the epistemology of Ludwick Fleck

In this section I would like to show how we can use some of the extant conceptual resources within the human – and social sciences – primarily Ludwick Fleck's epistemology, Empedocles's theory of perception and Peter Gärdenfors's cognitive science – in developing a doxology for our times. More specifically, I would like to show how these resources may provide a possible explanation of the scientists' non-seeing of the images in the caves.

Among the first theorists of the twentieth century to address epistemological questions in a sophist(icated) and Protagorean way, we find the microbiologist Ludwick Fleck. In a small work with great potential written in 1935 – *Entstehung und Entwicklung einer Wissenschaftlichen Tatsache. Einführung in die Lehre von Denkstil und Denkkollektiv*[1] – he presents the first formulation of what was to become, towards the end of the century, the dominating perspective on knowledge and knowledge-formation in the humanities and the social sciences. As an immediate forerunner to Thomas S. Kuhn and his notion of paradigm and, in a more indirect way, to Michel Foucault and his thoughts on objects of knowledge as being products of discourses and 'discursive formations', Fleck stands out as one of the most important and, at the same time, most unnoticed of thinkers within the field of epistemology and theory of science.[2]

In his comparative epistemology, Fleck does not envisage knowledge as a simple relation between an individual seeking to know and an object about which the individual has, or wants to have, knowledge. That is, he does not conceive of knowledge in terms of a dual relation

of the type, 'A knows that P'. He presents his position in the following manner:

> In comparative epistemology, cognition must not be construed as only a dual relationship between the knowing subject and the object to be known. The existing fund of knowledge must be a third party in this relation as a basic factor of all new knowledge. ... [H]istorical and stylized relations within knowledge show that an interaction exists between that which is known and the act of cognition. What is already known influences the particular method of cognition; and cognition, in turn, enlarges, renews, and gives fresh meaning to what is already known.
>
> Cognition is therefore not an individual process of any theoretical 'particular consciousness'. Rather it is the result of a social activity, since the existing stock of knowledge exceeds the range available to any one individual.[3]

Thus, Fleck understands knowledge neither as just an individual nor as an exclusively social phenomenon. What is thought to be knowledge is always the outcome of a process involving three factors: the individual looking for knowledge; the social, historical, practical and discursive epistemic situation having formed and continually forming the actual knowledge of the individual; and the object about which knowledge is sought. [4] Compared to Protagoras, Fleck has more precise conceptual tools to work with. Where the old sophist had recourse only to *logos*, Fleck is able to be far more specific and nuanced, as when he presents the difference between experimentation and experience:

> Whereas an experiment can be interpreted in terms of a simple question and answer, experience must be understood as a complex state of intellectual training based upon the interaction involving the knower, that which he already knows, and that which he has yet to learn. The acquisition of physical and psychological skills, the amassing of a certain number of observations and experiments, the ability to mould concepts, however, introduces all kinds of factors that cannot be regulated by formal logic. Indeed, such interactions as those mentioned prohibit any systematic treatment of the cognitive process.
>
> There is therefore no raison d'être for any speculative epistemology, even if it be regarded as a deduction from several examples.

> A great deal still remains to be discovered about the processes of cognition.[5]

Among the conceptual tools developed by Fleck to conduct his investigation of this process the most important and, in many ways, also the most radical, are the concepts 'thought collective', 'thought style' and 'active and passive connections'. Fleck is working with these concepts to redefine the notion of truth as well as that of fact, doing so in a way that is highly relevant to a doxological undertaking. Accordingly, some further reflections upon these conceptual tools and their usage are called for.

Thought style, active and passive connections

A thought style distinguishes a thought collective, which in turn is the basis for the style since the style is borne by the collective. Can we then really learn anything from such a blatant conceptual circle?

Yes, I believe we most definitely can. In effect, this circularity can be perceived as a strength, since it highlights both the discursive-historical (the style) and the social-historical (the collective) aspects of our knowledge, as well as the fact that these aspects are inextricably united. To put it bluntly: the circularity shows us just how immanent our epistemological position is, has ever been and will always be. However, in order to give some substance to this claim, the ways in which Fleck presents his concepts and how he envisages their interrelations has to be explained more in detail.

Compared to the *épistème* of Michel Foucault or the paradigm of Kuhn – two concepts to frame the dominant way of thinking of an entire epoch or of a whole discipline respectively – thought style appears as an exceedingly local and not a comprehensive concept.[6] Every thought collective frames its own style – and a thought collective can consist of anything from the occasional and short-lived connection between two persons, to stable, organized and institutionalized associations of people.[7] Fleck writes:

> Like any style, the thought style also consists of a certain mood and of the performance by which it is realized. A mood has two closely connected aspects: readiness both for selective feeling and for correspondingly directed action. It creates the expressions appropriate to it, such as religion, science, art, customs, or war, depending in each case on the prevalence of certain collective motives and the

> collective means applied. We can therefore *define thought style as* [the readiness for] *directed perception, with corresponding mental and objective assimilation of what has been so perceived.* It is characterized by common features in the problems of interest to a thought collective, by the judgments which the thought collective considers evident and by the methods which it applies as a means of cognition. The thought style may also be accompanied by a technical and literary style characteristic of the given system of knowledge.[8]

The resemblance between Fleck's notion, *thought style*, and Bourdieu's *habitus* is quite striking.[9] In the present context, I would like to stress that both authors insist upon the importance of the style or the *habitus* for our ability to perceive, and that this ability always is to be understood – in Fleck's words – as a readiness for directed perception. That is, the act of perception is never purely passive, but one participates with one's body, knowledge, competence, imagination and so forth in creating the very objects of perception. Considering the inability of the scientists to see *and* perceive in the caves, the full significance of these remarks is, hopefully, evident. Furthermore, the notion of style – albeit in a slightly different sense – is of paramount importance in cave art research, where it has been, and is still being, used as a means for dating the 'art'.[10]

For each thought style, certain epistemic relations appear as *passive*. That is, as given, evident, as facts that 'simply are there'; as 'real'. Other connections appear as *active*, that is, as more or less conventional results of man's striving to understand and comprehend. Fleck exemplifies:

> The origin of the number 16 for the atomic weight of oxygen is almost consciously conventional and arbitrary. But if 16 is assumed as the atomic weight for O, oxygen, of necessity the atomic weight of H, hydrogen, will inevitably be 1.008. This means that the ratio of the two weights is a passive element of knowledge.[11]

That the weight of hydrogen *really* is 1.008 thus appears as an objective truth – a truth about the world. And truths, so we tend to think, are out there to be discovered and reported on. They do not depend upon us human beings or our activity. But this is an illusion. We are, as Fleck writes in his preface, 'no longer conscious of our own participation in perception. Instead, we feel a complete passivity in the face of a power that is independent of us; a power we call "existence" or "reality" '.[12]

In talking about the active and the passive elements in cognition, Fleck makes use of a distinction between what I would like to call *absolutely motivated* and *relatively motivated* knowledge. The implication in using these terms is a relation analogous to semantic relations in a language: Any phoneme or combination of phonemes, any grapheme or combination of graphemes –what we usually call 'a word' or 'words' – can be used to signify anything whatsoever. Take for example the word 'loaf', signifying a piece of bread. There is no absolute motivation for using 'loaf' when referring to a piece of bread. But once a phoneme or grapheme – loaf – has been connected to a certain sense (an 'event' that is for the most part hidden deep in history, *if* there is any sense in talking about such 'events' at all) and through habits and tradition has become entrenched in a certain language, one can no longer freely and arbitrarily choose to give 'loaf' a new sense that is *completely* independent of how it has previously been used in that language. No, if one wants to alter the usage of an old word, one has to relate to the previous usage, underline that one is using the word in another, different sense, and perhaps also give the reasons as to why such a change in usage is called for.[13] One is forced to defend one's new usage against the always already existing semantic motivation of the word. That motivation is always a relative motivation that has nothing to do with what the word 'really' means (there simply is no such thing as what a word 'really' means), but with how the word is used, perceived and understood within a specific language community, that is, within a semantic context that exceeds and comprehends even the very attempt to redefine the word in question.

Thus, analogously, absolutely motivated knowledge would be knowledge whose objectively determinable and indubitably certain ground or correlate exists independent of all human activity – that is, a typical and traditional metaphysical foundation, *archè*, for knowledge. Unsurprisingly, Fleck does not believe in such a foundation or that such knowledge exists or has ever existed. But neither does he think that knowledge, because of this lack of independent objective foundation, is arbitrary. In analogy with the semantic example just given, he holds that once a point of departure has been chosen – and it has always already been chosen – or an hypothesis or a certain axiom is considered as true or at least probable, then a certain 'amount' of 'other' knowledge will follow. This knowledge could then be called relatively motivated in the sense that it has its 'foundation' and justification within a certain system of knowledge. Nevertheless, this 'relative motivation' often presents itself in guise of objectivity and certainty, and the active

moment that is always present in every act of cognition is, as it were, repressed. Thus, we remain, most of the time, ignorant of how active and creative our cognition really is.[14] Fleck writes:

> Cognition therefore means, primarily, to ascertain those results, which must follow, given certain preconditions. The preconditions correspond to active linkages and constitute that portion of cognition belonging to the collective. The constrained results correspond to passive linkages and constitute that which is experienced as objective reality. The act of ascertaining is the contribution of the individual.[15]

We are now in a position where we can better understand the scope of Fleck's definition of thought style as 'directed perception, with corresponding mental and objective assimilation of what has been so perceived': We perceive that which we are able to perceive, given the abilities we have acquired through education, physical and mental training, habit and praxis. The novice looking into the microscope is *not able to* discern what the trained scientist has *learned* to see. But the process transforming a novice into a fully fledged scientist is not a process wherein an individual learns to see *all* that there is to see. No, the individual learns to see what is *supposed to be there to be seen* – which is a highly relevant factor in explaining the reluctance or even inability among the nineteenth-century archaeologists to perceive the paintings in the caves first as paintings, and then as Palaeolithic.

In his description of this process, Fleck stresses that it is just as important to learn to sift out that which is considered to be irrelevant as it is to learn how to organize the perceived according to the relevant style. Good science is science that is producing results that *are in style*. And these results often appear as established facts and truths, just because the active moment in cognition is hidden by the experienced evidence, the entrenchment of the 'in-style' worldview that, in turn, is further confirmed by the 'in-style' results. Being unaware of this fundamentally active aspect of our cognition can be fatal in many ways – especially since such unawareness is at the root of the all to common tendency to perceive one's own perspective, one's own thinking and convictions, as representing *the* Truth and what is Real. This is where every kind of narrow-minded universalism originates:

> To the naïve research worker limited by his own thought style, any alien thought style appears like a free flight of fancy, because he

> can see only what is active and arbitrary about it. His own thought style, in contrast, appears imperative to him, because although he is conscious of his own passivity, he takes his own activity for granted. It becomes natural and, like breathing, almost unconscious, as a result of education and training as well as through his participation in the communication of thoughts within his collective.[16]

The individual is always caught in a style, a way of thinking, 'with which it is not possible to be at variance'.[17] The thought style presents us with a world and a worldview – an objective reality. However, one must not confound this objective reality with some kind of Objective correlate. On the contrary, this objective reality 'can be resolved into historical sequences of ideas belonging to the collective'.[18] Thus, we have reached the point at which it is time to abandon the style for the collective.

Thought collective

A typical thought collective is, as Fleck puts it, 'a well organized collective [that] harbours a quantity of knowledge far exceeding the capacity of any one individual'.[19] It is the bearer of a certain thought style, a style that also serves as a distinctive mark for the thought collective.

We already have a slight notion of how such collectives are formed through sedimentary processes into more or less stable social-historical forms. They are formed by tradition, education, language, habits, ways of thinking and being – everything that contributes to linking people together and to creating common values and worldviews. If the thought style may be said to represent – in the widest sense possible – the discursive aspect of *logos*, the thought collective also includes its non-discursive aspects: what is considered to be the right, sensible, normal and ordinary way to *act* or to *behave*:

> A thought commune [– a somewhat smaller thought collective –] becomes isolated formally, but not in an absolutely binding way, through statutory and customary arrangements, sometimes a separate language, or at least a special terminology. The ancient guilds, for instance, are examples of such special thought communes. But even more important is the restricted content of every thought collective as a special realm of thinking. There is an apprenticeship for every trade, every religious community, every field of knowledge, during which a purely authoritarian suggestion of ideas takes place, irreplaceable by a "generally rational" organization of ideas.[20]

Most of us take part in many thought communes and/or collectives at the same time and in manifold ways. The many 'apprenticeships' that each one of these collectives craves to let a person become part of the collective give us the magma of languages, worldviews, habits, traditions, prejudices, values and attitudes that we put into play, transform, develop, criticize and/or confirm in our lives. We are shaped, kneaded, created by the thought collectives. For Fleck, the thought collectives are the real actors in the field of knowledge. But how is it possible for a fiction, a 'personification of a common result produced by interaction', to act in the way that Fleck envisages?[21] Is it not a mistake, and in addition a very clumsy mistake, to ascribe the powers and faculties of individuals to more or less occasional groupings of people and then think of them as if they were acting, conscious beings?

How you prefer to answer this question depends, of course, upon what conception of the individual human subject you cherish. If you adhere to a Cartesian claim that the human being is fundamentally defined by the fact that *she thinks* (the cogito), Fleck's position will seem somewhat absurd. What could it possibly mean to say that a collective thinks, other than that the individuals that make up the collective think?

Fleck is aware of this problem. He turns the relation on its head, so to speak: according to him, individuals are first and foremost collective:

> But what is any personality if not the personification of many different momentary personalities and their common psychological Gestalt? A thought collective, by analogy, is composed of different individuals and also has its special rules of behaviour and its psychological form. As an entity it is even more stable and consistent than the so-called individual, who always consists of contrary drives.[22]

For Fleck, man is social through and through. It is not possible to envisage a human being outside, before or beyond the relations that connect her to other humans as well as to traditions, language and history. Reflecting upon who or what the subject of thinking is, Fleck approvingly quotes Gumplovicz, who claimed that 'what actually thinks within a person is not the individual himself but his social community'.[23]

Before closing this section, I would like to highlight an important thing. It concerns the notion of autonomy. The way of viewing the individual and the social as multi-dependent and interdependent upon one another is one of many points where Fleck's thinking interestingly intersects with Castoriadis's. Neither of them sees the human subject as an autonomous, free subject in the liberal or neoliberal sense of

the term (i.e., a self-identical, entirely self-conscious, choosing entity). Most certainly both of them would emphasize the importance of not confusing social and political autonomy with freedom of choice. Political autonomy involves a conscious dealing with the creation of a human world, that is, with something that precedes, goes far beyond, and in a certain sense precedes the problems of an individual choosing between alternatives.[24] Castoriadis writes:

> The self-institution of society is the creation of a human world: of 'things', 'reality', language, norms, values, ways of life and death, objects for which we live and objects for which we die – and of course first and foremost, the creation of the human individual in which the institution of society is massively embedded.[25]

Truth and facts

By now it is evident that for Fleck truth can never be a question of correspondence to the world as it, independent of all human endeavours, 'really' is. No, according to him truth is 'a stylized solution' of a problem:[26]

> Truth is not "relative" and certainly not "subjective" in the popular sense of the word. It is always, or almost always, completely determined within a thought style. One can never say that the same thought is true for A and false for B. If A and B belong to the same thought collective, the thought will be either true or false for both. But if they belong to different thought collectives, it will just *not* be *the same* thought. It must either be unclear to, or be understood differently by, one of them. Truth is not a convention, *but rather (1) in historical perspective, an event in the history of thought, (2) in its contemporary context, stylized thought constraint.*[27]

Since the truth of a thought or a statement is determined within a thought style that is borne by a certain thought collective, the question of belonging, and not belonging, to a thought collective assumes a crucial importance. It may seem as if Fleck ends up in the classical problem of the context here – that is, if the style and the collective (the context) are to determine what is true and false, then one has to be able to sharply delimit both the style and the collective; if not, the question of truth will remain forever indeterminable, fleeting and arbitrary.

A condition for the validity of this critique is the presupposition that the aim of contextualizing is to preserve an absolute concept of

truth through replacing the *archè* or the *telos* of classical epistemology with a notion of context that would function as an absolute determination in the same way as the knowledge foundations it is supposed to replace were thought to do. This is not Fleck's position (nor is it mine) since such a manœuvre would only transplant the question of the foundation of knowledge from one illusion to another.

Fleck is not searching for an absolute truth, and he is definitely not trying to replace one metaphysic with another. His aim is not to establish radical ruptures and unequivocal frontiers between different thought collectives or thought styles in order to determine definite truths. Rather the opposite, actually: The styles and the collectives are, as we have seen, always already and inevitably engaged in multiform interactions, both historically and within the contemporary social field – for instance through the multi-belonging of different individuals that in manifold ways guarantees the interconnections between the styles, if only through 'harbouring' them within themselves. This multi-belonging is in many cases unproblematic and normal. However, Fleck's concepts do not exclude the possibility of a more or less total mono-belonging, for example within sects and within collectives that for one reason or another (geographical, ideological and so forth), are cut off or have severed themselves from the rest of the world. The limits that Fleck is concerned with are not absolute in any strict, ontological sense, but socially and epistemically efficient limits – that is, limits that make a difference, that have concrete social and historical effects within our world. Therefore, following Fleck, to speak of truth is not just a question of how to determine which truth value (T or F) one should ascribe to a certain thought or statement. Such truth questions are inseparable from questions relating to world view, notions of selfhood, conceptions of life, of death and of how to think. Fleck writes:

> Because it belongs to a community, the thought style of the collective undergoes social reinforcement…. Such reinforcement is a feature of all social structures. The thought style is subject to independent development for generations. It constrains the individual by determining "what can be thought in no other way." Whole eras will then be ruled by this thought constraint. Heretics who do not share this collective mood and are rated as criminals by the collective will be burned at the stake until a different mood creates a different thought style and different valuations.[28]

This description could just as well have been a characterization of the both formative and repressive force of doxa. The narrow connection

between social community and thought community; the demarcation against 'the unthinkable' and the violence directed towards the 'heretics'; the inexorable interconnection of thinking, values and knowledge; the inertia as well as the change. Thought constraints are an inevitable part of every doxa – or as Roland Barthes cogently puts it, connecting thought and perception:

> The *Doxa* is current opinion, meaning repeated *as if nothing had happened*. It is Medusa: who petrifies those who look at her. Which means that it is *evident*. Is it seen? Not even that: a gelatinous mass, which sticks to the retina.[29]

The inertia of the thought constraints is at one and the same time both a precondition and a problem for knowledge, truth and creation. Without inertia, no thought style (or doxa) could ever be formed, and new knowledge would not be produced. At the same time inertia slows down and hinders, and sometimes completely prevents, *all* change. And, as we know only too well, inertia is not only passive hindrance – sometimes inertia takes the form of active repression and persecution, all in the name of what is claimed to be common knowledge and for the common good.

Facts

According to Fleck, facts represent a specific kind of inertia that is often put forward as the very foundation of our knowledge, an inertia against which the truth value of statements and thoughts may be tested. A fact – it may be scientific or ordinary – is a passive element in our knowledge and consequently seems to be a given, natural, irrefutable and real. A fact does not appear as a fiction, nor as a human creation – it is the stuff that the world is made of regardless of us humans. Facts resist speculation. Facts have to be put forward to support hypotheses. In a dense passage, that I have taken the liberty to divide into three parts, Fleck writes:

> In the field of cognition, *the signal of resistance* opposing free, arbitrary thinking is called a fact. This notice of resistance merits the adjective "thought collective", because every fact bears a threefold relation to a thought collective: (1*) Every fact must be in line with the intellectual interests of its thought collective*, since resistance is possible only where there is a striving toward a goal. Facts in aesthetics or in jurisprudence are thus rarely facts for science.[30]

Thus, a fact is a fact only if it is 'in line' with a specific intellectual interest. Bourdieu once articulated the same, or a very similar, position, by claiming that you cannot use the stakes of a geographer to make a philosopher tick.[31] One way to interpret both Fleck and Bourdieu in this connection would be that they are –in line with the title of Fleck's book – talking *only* about scientific facts. Consequently, they do not make any claims about facts outside academic disciplines. But such an interpretation is hardly tenable. Many resistances to thought – that is, many facts – seem to have a tendency to disseminate beyond all disciplinary boundaries. They blend with habits, evaluations, traditions, prejudices and much more to form what we, vaguely and loosely, call the world view of a culture, of a time and society. All this forms the collective, shared and presumed knowledge that often is called *common sense,* but that I would rather call doxa. To ask for the facts and nothing but the facts is a valid question only in a situation, and in relation to a specific doxa, where facts are held to be both interesting (even if perhaps problematical and difficult to ascertain) and where there is a general agreement about what a fact is, that is, about what kind of signals of resistance are to be counted as facts. Even if 'facts in aesthetics or in jurisprudence' rarely are facts for science, and even if it is difficult to engage a geographer and a philosopher in the same kind of scientific projects, I think that it is safe to say that, in a specific cultural and historical situation (for instance Western Europe in the beginning of the twenty-first century), scientists, philosophers, lawyers and the rest of us tend to have a rather well-developed notion about when facts are (commonly supposed to be) relevant and when not, as well as about what are generally accepted as facts in these situations. If I am correct in assuming this, then I believe we have a reason for understanding the claims of both Fleck and Bourdieu concerning facts in a more general way: A thought style, that is the necessary prerequisite for perceiving something as a resistance to thought, that is, as a fact, is not only a disciplinary matter. It may permeate many disciplines and inform many doxai and, hence, participate in forming the common sense (or *epistème*, as Foucault would have said) of a whole period or culture. This last remark brings us back to the interrupted quotation, and the second relation between facts and thought collectives:

> (2) The resistance must be effective within the thought collective. It must be brought home to each member as both a thought constraint and a form to be directly experienced. In cognition this appears as the connection between phenomena, which can never be severed

> within the collective. This linkage seems to be truth and conditioned only by logic and content.[32]

We have already discussed how thought constraints are brought home to the members of a collectivity (habits, traditions, training, etc.). Let us now focus on Fleck's idea that the established constraints are experienced as given, passive and immutable elements of knowledge. They can never be severed from within the collective. In fact, this serves as a major argument for adopting Fleck's *comparative* epistemology. Only from the outside of a thought style, or when it changes (Fleck does not, as we have seen, deny the possibility of change – but nor does he explain it; change just seems to 'be there', inexplicably) can the linkage and the constraints pertaining to the style be revealed to be what they are, that is as active elements in cognition. The relativity of the facts thus may become clear even to those who partake in the thought collective.

This idea about the blessings of systematic comparison with the foreign in order to discover one's own hidden presuppositions is of course not an innovation of Fleck's – it has been a major feature of sceptic thought ever since antiquity. Michel de Montaigne, who may perhaps be seen as a doxologist *avant la lettre*, defends this comparative method in many of his *Essays*, most famously, perhaps, in the essay on cannibals:

> Now, to return to my subject, I think there is nothing barbarous and savage in that nation, from what I have been told, except that each man calls barbarism whatever is not his own practice; for indeed it seems we have no other test of truth and reason than the example and pattern of the opinions and customs of the country we live in. *There* is always the perfect religion, the perfect government, the perfect and accomplished manners in all things.[33]

Montaigne's words bring us to the third and final relation that a fact must have to a thought style, as well as to Fleck's comment upon his threefold definition:

> (3) The fact must be expressed in the style of the thought collective. The fact thus defined as a "signal of resistance by the thought collective" contains the entire scale of possible kinds of ascertainment, from a child's cry of pain after he has bumped into something hard to a sick person's hallucinations, to the complex system of science.[34]

The observation that every fact and every truth must be expressed in the style of the thought collective is, perhaps, the most foresighted of Fleck's remarks – especially when it is, as here, accompanied by examples giving his thoughts a concrete footing. The cry of a child is the stylish reaction to pain within a thought style which most of us probably recognize. Consequently, it is a fact in our world that children cry when hurt – and that any other behaviour would be conceived by us as odd or 'un-stylish' and would therefore need to be explained. Here, if not before, it becomes clear just how normative a thought style is: Facts are what the normal (real, true) world is made up of.

The 'principle of reality' is the name given by psychologists to this in-style attitude – when one claims that somebody is hallucinating, one is putting this principle into play. The disciplines and sciences are specific in the respect that they tend to establish their own epistemic domains, wherein specific thought styles develop, often quite autonomously (depending on which science and what claims to knowledge) in relation to the thought style or doxa dominating the 'surrounding' society.

Fleck's topicality

In Fleck's short work we find a resourceful and perspicacious attempt to formulate the cognitive implications of the epistemic situation that we human beings always have had to deal with: In manifold ways our knowledge is, in its production and mediation, conditioned by and connected to the ever-changing bodily, historical, social, disciplinary, individual and linguistic situation in which it is shaped.

An obvious, and not uncommon, criticism of a position such as Fleck's (as well as of my own) is to question the scope of the claim advanced and ask 'How can you know this? How can you claim to know that all knowledge is mediated, transformed and socially dependent in this way?' My answer would be that nobody can *know* this, if by knowing we are still referring to some epistemic, neutral, objective knowledge.[35] All claims are formulated in, and from within, a doxa, from within a thought style, and their scope is entirely dependent on whether or not they succeed in convincing their audience. The scientific situation is and has continuously been one of rhetorical argumentation rather than neutral, objective proving. The quest for knowledge has always been inextricably bound up with the quest for domination and power, be it over the world or over other human beings, or both. Committing yourself to truths and facts does not, alas, prevent you from becoming the

spokesperson for an ideology, an interest or a particular world view. But being aware of this might help to avoid the worst dogmatic excesses, or the deepest dogmatic slumbers. In my opinion, Fleck is prolonging and developing Protagoras's notion of man as the measure of all things into a version that is, or at least should be, scientifically acceptable in the twenty-first century.[36]

Fleck argued that facts, truth and knowledge are in general always dependent upon some collective and its thought style. In a way, there are nothing but contexts, nothing but thought collectives and styles. But they have never been, nor will they ever be, delimited in such a way as to allow for the rigorous determination that the traditional notion of knowledge (episteme) demands. Once again we are left with doxa and all the effective knowing that we live in and through. This is a crucial point, both for Fleck and for doxology: Being left with doxa does not mean being left with chimeras, or nothing but the semblance of reality. No, in each doxa, in each thought collective, we find an 'objective reality', sometimes contested, other times not, having real, concrete effects within the collective – and not accepting this reality has, most of the time, very real consequences. The stability of this 'objective reality' is dependent upon the stability of the doxa, of the thought collective and the thought style – and not on the presumed stability of the World out there. Though it may seem both rational and tempting, we cannot even conclude that since most thought styles and doxai seem to accept some basic facts concerning the world and human society (for example, our need of food and water for surviving or of air to breathe), that consequently these facts or opinions represent the Real World. The only thing we can say is that since most of us seem (this word is crucial here) to accept these facts, then we may, in an admittedly vague and rather uninformative way, be said to belong to the same thought style or doxa, at least as far as agreement upon these very facts goes. But in no doxa, nor in any thought style or collective, do we have access to *the* Real World.

Fleck was not the only one to start thinking along these lines in the beginning of the twentieth century – in France, around the same time as Fleck penned his book, Gaston Bachelard formulated ideas that were to become the core of the historical epistemology. Some 20 years later, after the Second World War, ideas such as Fleck's started to circulate and proliferate within the academic community in a way that could very well be explained by Fleck's comparative epistemology. All thought styles and collectives, all these truths, facts, connections and determinations, are in constant motion, ever-changing – which also

gives a potential answer to the worries expressed earlier in the present work concerning the possibilities of, as an individual, ever escaping the repressive force of the thought style. In a passage that, though about 75 years old, yet seems quite topical, Fleck writes:

> Thoughts pass from one individual to another, each time a little transformed, for each individual can attach to them somewhat different associations. Strictly speaking, the receiver never understands the thought exactly in the way that the transmitter intended it to be understood. After a series of such encounters, practically nothing is left of the original content. Whose thought is it that continues to circulate?[37]

Fleck provides an answer to this question, and he treats many more of the intricate details of how knowledge is formed, transformed and transmitted than have been discussed in this brief survey. But here, in this text that at this very moment, following Fleck, is unavoidably being 'misunderstood' by you who read, we leave it open. Unless it is Protagoras's thought that continues to circulate, transmitted through Fleck, and me, and you?

Seeing what there is – bodily conditions

Fleck's comparative epistemology makes it possible to elucidate the curious perceptual inability of the trained archaeologists in the painted caves: The constraints of the thought style and thought collective to which they belonged and by which they were formed did not readily allow making the connection between the 'in style' portable and the 'unstylish' mural Palaeolithic art. Perhaps it was the fortunate status of amateur archaeologist Sanz de Sautuola – not entirely integrated in the archaeological doxa of the time, not completely submitting to the thought style – that facilitated his mental leap. Nonetheless, this is only a first step. The indispensable conceptual and bodily conditions of possibility for such a leap still need some further clarification.

Then, as a complement to the Fleckian, more social and discipline-related explanations of the scientist's inability to see what they saw in the caves, I would like to try out an idea about conceptual formation presented by cognitive scientist Peter Gärdenfors.[38]

In a discussion of what he calls 'conceptual spaces', Gärdenfors elaborates on an example of how we apply concepts according to the 'principle of closest match': Young children, whose conceptual spaces

are not yet very diversified, tend to apply the concepts that they have as best they can – so, for example, when a small child for the first time sees a horse, and already is acquainted with dogs, the child tends to call the horse a dog until taught to do otherwise. But why, one may ask, not call the horse a lamp, or a bird, or a father or something else that the child already knows? According to Gärdenfors, this is explained by the principle of closest match, by which certain characteristics necessarily prevail over other (in this case 'four-leggedness' or perhaps 'furry', depending on how the child's concepts were 'construed' from the start: 'Look at the dog – it has four legs you see!', or 'Look at the dog, it is furry and warm').[39] Or in Gärdenfors's own words:

> This mechanism also explains some aspects of the overgeneralization that often occurs in concept formation. For example, when a child learns the word "dog" (or a "bow-wow" version of it) this notion will be applied not only to dogs, but to wolves, horses, calves, and so forth. Presumably, the child only masters a few prototypes in animal space and these prototypes are used to generate a partitioning of the entire space. Consequently, the child will overgeneralize a concept in comparison to its standard use. After all, communication functions better if the child has some word for any animal than if it has no word at all. When the child learns more prototypes for other animal concepts, however, it will gradually adjust an early concept to its normal use since its partitioning of the animal space will become finer.[40]

I include this example since it gives some support to my reasoning. Accordingly, one part of the explanation as to why the scientists did not see the paintings in the caves as readily as one would have expected, may be that they simply had too fine-tuned and far too-diversified conceptual spaces in relation to art in general as well as to Palaeolithic portable art, to be able to make the connection. They simply could not find any obvious 'closest match' to what they saw and, hence, could not categorize it. ('There are drawings on the wall, what could they possibly be?', as Garrigou wrote.) Gärdenfors again:

> An important point is that information about an object may be of two kinds: *propositional* and *conceptual*. When the new information is propositional, one learns new *facts* about the object, for example, that *x* is a penguin. When the new information is conceptual, one *categorizes* the object in a new way, for example, *x* is seen as a penguin

> instead of as just a bird. It is important to notice that describing information as propositional or as conceptual does not mean that these kinds of information are in conflict with one another. On the contrary, they should be seen as different *perspectives* on how information is described.[41]

In Gärdenfors's terms one may perhaps describe the archaeologists' non-perception of the paintings in the caves as a case of failure to categorize their experience as a 'Palaeolithic art-experience', while at the same time they were aware of, wondering about and gathering propositional information about, the paintings, though only in terms of 'drawings' or 'markings' in general. So even if the archaeologists obviously saw something, they did not perceive this something as meaningful – or at least not meaningful in relation to their scientific interests. Consequently, they did not take heed of what they saw, and soon forgot all about it.

Another way of approaching this problem – tying it even closer to the general doxological perspective on knowing and knowledge – is presented in a fictional example created by Catherine Z. Elgin and Nelson Goodman in order to criticize the traditional concept of knowledge as 'true verified belief'.[42] They portray Sherlock Holmes's acute sense for details and distinctions as an obstacle preventing him from fulfilling the requirements of knowledge, whereas Watson's dull senses readily permit the latter to accommodate the very same conditions. They write:

> The epistemic inutility of intelligence that follows is not the sceptic's fatalistic conclusion that since no one knows anything, dullards are no worse off than the rest. It is the more disconcerting result that since qualities such as sensitivity, breadth, and logical acumen often interfere with the satisfaction of the requirements for knowledge, individuals deficient in such qualities have an epistemic edge. The quest for knowledge may then be furthered by the cultivation of obtuseness.[43]

It can be argued that the very same 'mechanism' may have been at work in the case of the professional archaeologist's 'non-seeing' of the mural cave art. In this sense, the guides, as well as Sanz de Sautuola's daughter Maria, are in a position that is more Watson-like. One can imagine that their conceptual space in relation to art in general, and Palaeolithic art in particular, were not as diversified or fine-tuned as that of the

scientists, thus making it possible for them to achieve the matching, that is, both seeing and perceiving the paintings as paintings, no more and no less, without knowing exactly what they saw.

Moreover, when the young Maria cries 'oxen', she is in a strict sense mistaken (the pictures are pictures of bison and not oxen), but she is applying a concept sufficiently close to bison for her father to be able to pick it up and make the connection once he has 'got the eye in', to use Clegg's happy phrase. And it is, if I am correct in my assumptions, no doubt decisive for his ability to acquire 'the eye' so quickly that Sanz de Sautuola himself was not trained and taught within the confines of the thought collective and style of a scientific discipline.

But why, one may still feel inclined to ask, would scientific training be disadvantageous in this respect? Should not a good scientific training involve learning how to perceive the unexpected?

Yes, ideally so. But there is ample evidence that this is not always (or even normally) the case in science. A recent example from the very field of cave-art studies is illustrative. It deals with questions relating to how Palaeolithic art, once recognized as such, is to be dated: Before C-14 and subsequent techniques for fairly exact direct datings, the style of the paintings was often the only feature used in the dating process. And, not surprisingly, the basic assumption in stylistic dating has been: The more primitive the style, the older the painting; the more advanced the style, the younger the painting. Now, despite the fact that fairly reliable dating has been available in the field for some time,[44] the old habits still seem to determine how dates are attributed.[45] Genevieve von Petzinger and April Nowell write, concerning the dating of the Font-de-Gaume cave:

> The paintings at the site are classified as late Solutrean/early Magdalenian, with the majority of the images dating to the latter period. This dating is based entirely on stylistic attributes. ...
>
> However, while there is well-stratified archaeological evidence for Mousterian, Châtelperronian and Aurignacian use of the cave, there are no Solutrean or Magdalenian remains other than a scatter of possible Solutrean surface material that is unprovenanced. The strength of belief in the stylistic dating system is so great, however, that this lack of evidence to support Font-de-Gaume's assignment to later periods has been dismissed in favour of the stylistic attributes of the art. ... While it is always possible that these later artists did not leave anything behind, the presence of early periods with good stratigraphy within the principal gallery would have

> been sufficient in most cases to result in an assignment to the corresponding period.
>
> Not using tools uncovered at the site as part of the chronological assessment of Font-de-Gaume is a good example of what can happen when a specific paradigm becomes so deeply entrenched in the minds of the researchers that other lines of evidence are ignored when they are in conflict with what we expect to see.[46]

The French expression *formation* (shaping), designating education, especially higher education, comes very close to expressing what goes on within a scientific discipline: The would-be scholar is, as Fleck has shown, moulded and shaped into a full-blown scientist not only by acquiring the necessary knowledge or the requsite methodological competence, central to the discipline. He or she also has to acquire much less obvious, and therefore much more elusive, selective ways of perceiving and describing the world, a style of thought and expression, as well as ways of being in this world. These latter competencies are no less created, nor less required, by the discipline than are the former ones, but scientists tend to mistake them for the way things are or the only rational way to be or behave and, consequently, do not question them (at least not on a regular basis). The selective, educated, in-style perception is thus often mistaken for neutral and passive perception, for seeing what is there to be seen – and, hence, there is no real reason to question it. So, the example concerning the dating of Font-de-Gaume shows us two things: Firstly, the *in-style* way of dating, that is, using the very notion of style as the sole criterion for assessing the age of the paintings, actually has blinded the researchers to facts that they would otherwise have considered; secondly, and more hopefully, there is always a possibility of also an immanent critique of the *in-style* way of doing science and producing knowledge. The formative force of doxa, of the thought collective with its stylistic requirements or of education, may be strong and prevailing, but it can never completely determine all agents in the field, nor does it exclude change and reassessment.

Fleck's and Gärdenfors's ideas may go a long way in explaining why the scientists were slower in perceiving the paintings in the caves firstly as paintings, then as Palaeolithic paintings. They do not, however, help us explain what they saw. Nowadays though, after some hundred years of cave art research, there appears to be a general agreement regarding what is seen in the caves: figurative, even naturalistic, depictions of horses, bison, aurochs, reindeer and so on. Jean Clottes, who today holds a central position in the field of cave-art studies in France, even goes so

far as to state this, in his and David Lewis-Williams's *Les chamanes de la Préhistoire* from 2001:

> Even persons who have never visited a painted cave and who have no interest in mural cave-art will immediately recognize the photography of a painted bison or of a chamois for what it is, that is a representation of an animal by a prehistoric artist, be that notion vague and imprecise. [47]

This is a highly problematic statement, and I will shortly return to it. But for the moment, let us agree with Clottes that there is definitely something there, in the caves, that can be observed, perceived, interpreted, discussed and described. Only, the question is: What, and what we can know about it?

The relevance of antique perceptual theory

It is time for yet another strategic move. I would like to make the reflections on the part concepts play in perception more concrete, by giving an example from antiquity. At the same time I will develop a bit further what I take to be the consequences of a doxological position for our contemporary understanding of how we humans experience and perceive the world. In fact, despite doxology being a post-postmodern teaching, it has many affinities with premodern and even antique thought. For instance, the perceptual theory of Empedocles, which will be the focus of this paragraph, is more consonant with positions such as Bourdieu's and Fleck's than with many contemporary, and perhaps more scientifically correct, perceptual theories. This is one reason why we should not let ourselves be deterred from using conceptual resources and ideas from our far past to address contemporary issues, if they appear to elucidate our problems. Let us consider what a scholar of today can make out of Empedocles's 'outdated' theory of perception, and at the same familiarize ourselves with what I consider to be a doxological approach in research.

Jesper Svenbro, French philologist and Swedish poet, made the perceptual theory of Empedocles the subject of one of his texts.[48] This commentary on his text will focus at least as much on how he approaches his subject as on the actual content of his arguments; Svenbro's handicraft being, from a doxological point of view, at least as interesting as the results he presents.

By way of introducing his topic, Svenbro makes use of Wittgenstein's familiar discussion of the duck-rabbit to bring out the peculiarities of the ancient Greek expression, *bleponta ou blepein*, 'to see without seeing'. An illiterate person who looks at a row of letters is in this situation. He sees only one aspect of the scribbles – the letters (the *grammata*) – but he does not see what they mean (he cannot see them as *stoikheia*, as a meaningful sequence of letters): He sees without seeing. Put in another, more Wittgensteinian, phrasing: He is blind to one of the aspects of what he actually sees. Svenbro then turns to a brief discussion of the *Optics* of Euclides, and shows that for the ancient Greeks, the gaze was thought of as a 'visual ray' going *from* the eye *to* the object seen. After these preliminaries, Svenbro is prepared to attack his principal subject: The perceptual theory of Empedocles. His point of departure is fragment 84 (in the Diels-Kranz edition) where the human eye is compared to a lantern, prepared by a man who is venturing out into a stormy night, and who therefore needs to shelter the light inside the lantern from the violent winds. In the analogy, the pupil is the light inside the lantern, projecting its fire through the vitreous body (the transparent shelters in the windows of the lantern) out into the world.

Svenbro starts by confronting Jean Bollack's interpretation/translation of the fragment. Bollack says that Empedocles's only concern is with the anatomy of the human eye – not with the gaze. For Bollack, the pupil is the lantern taken as a whole, and therefore the analogical counterpart to the vitreous body of the eye will have to be the stormy night. Interpreted in this way, the fire of the eye – that is the gaze – never leaves the eye, but stops, as it were, at its 'threshold'. One reason for Bollack's interpretation seems to be that he wants to save Empedocles from contradicting himself. And he is not the first one to put forward such an interpretation. Aristotle already pointed out that the perceptual theory of Empedocles does not seem to be consistent: 'Sometimes he says that we see in the way described by the analogy, sometimes that we see due to the emanations from the things seen'.[49]

But Svenbro does not accept Bollack's way of trying to save Empedocles. Instead, he shows that Bollack's interpretation is faulty, and that one has to accept that Empedocles actually states that there is fire, or rather the light of fire, emanating from the eye. And – to explain how Bollack could be so mistaken – Svenbro evokes Gérard Simon who claims that the epistemic break between ancient and modern optics is so complete that ancient optics, and the knowing it represents, has become all but unthinkable for the modern man.

All the same, Svenbro himself is not entirely convinced by Simon's arguments. In a somewhat surprising move, he refers to Oliver Sacks and his 1982 book, *Awakenings*. Sacks describes the case of a patient which seems to suggest that perception is of an almost *teleological*, pre-modern if you like, nature: He writes about a female patient – Hester – suffering from 'kinematic vision' (that is, her visual perception is cut up as if in different frames):

> Thus, on one occasion, when Hester was being visited by her brother, she happened to be having kinematic vision at about three or four frames a second, i.e. a rate so slow that there was a clearly perceptible difference between each frame. While watching her brother lighting his pipe, she was greatly startled by witnessing the following sequence: first, the striking of a match; second, her brother's hand holding the lighted match, having 'jumped' a few inches from the matchbox; third, the match flaring up in the bowl of the pipe; and fourth, fifth, sixth, etcetera, the 'intermediate' stages by which her brother's hand, holding the match, jerkily approached the pipe to be lit. Thus – incredibly – Hester saw the pipe actually being lit several frames too soon; she saw 'the future', so to speak, somewhat before she was *due* to see it ... If we accept Hester's word in the matter (and if we do not listen to our patients we will never learn anything), we are compelled to make a novel hypothesis (or several such) about the perception of time and the nature of 'moments'.[50]

Svenbro comments: "Could it perhaps be the case that visual perception is inseparable from thought? In any case, the quote relates a state of affairs that is quite uncomfortable for 'us moderns', a state of affairs that reasonably should undermine the assurance with which 'we' imagine the visual perception."[51]

Svenbro then returns to Empedocles and fragment 84. He acknowledges that even though the gap between ancient and modern experience of perception is not as evident or clear as Simon claims, nevertheless the modern concept of light has no counterpart in the ancient world. The ancient concept of light seems to be an undifferentiated one, where one and the same term can be used to designate either physical light (the light of the sun) or psychical light (the light of understanding). If this is the case, we do not have to accept that there is an inconsistency in Empedocles's theory of perception: Seeing works, in fact, both ways – physical light emanates from the objects we see, and the light of understanding emanates from our

eyes. And then, perhaps, Aristotle's remark concerning Empedocles – 'One moment he says: we see like this; the next: we see like that' – should not be understood as pointing out an inconsistency but rather as a statement about his theory – 'He says: one moment we see like this, the next like that', and that Empedocles conceives of perception as a double movement, one part active, the other passive. An idea that seems to be consonant with fragment 88 in Diels-Kranz:

> [F]rom both there was one vision.

Thus ends Svenbro's text. It is an example of creative thinking at its best, not confined within the received compartments of science or knowing. With care, historic and linguistic knowledge and meticulous attention to details, he sets in motion different (social imaginary) significations; in addressing his problem he makes use of what he finds useful without being constrained by preconceived notions of how one is to treat a philosophical problem. In the process he manages to make a case for a critical attitude towards our own cherished beliefs, as if we were in the position of a person who cannot see the duck in the duck-rabbit, but who can be taught to do so.

I have included this example here for two reasons. Firstly, for what it teaches us about human perception; secondly, for what it shows us about doing science. Perhaps this way of producing knowledge through a meticulous *bricolage* is also a possible path for making sense of Palaeolithic cave art. I trust that the way in which Svenbro invites us to enrich our understanding of not only Empedocles's theory, but of our contemporary concept of perception as well, could be exemplary also for other epistemic settings.

The degree zero of perception – the relevance of contemporary cognitive science

In the beginning of this book I claimed that Protagoras was right in stating that man, taken as mankind, is the measure of all things. I argued my point from a constructivist philosophical perspective, evoking the importance of, and the intertwining of, habits, language practices, emotions and conceptualizations in the creation of the world we measure. Now, I would like to continue my strategic manoeuvring and argue the same point, but from a slightly different perspective – that of cognitive science. More specifically, I will return to Gärdenfors and examine some of the arguments advanced in his book *How Homo*

Became Sapiens – on the Evolution of Thinking[52] to see what we can learn from them regarding what we can see and perceive, in general as well as in the caves. Gärdenfors's ideas are of particular interest, not only because he addresses issues of prime importance for any study of the earliest forms of representations known to mankind. Even more importantly, he also manages to bridge the gap between constructivism and realism. This he does from the inside, as it were, of cognitive science and does so in what I would like to call a decidedly doxological manner – that is, maintaining the notions of reality, objectivity and truth while at the same time transforming them in accordance with the general doxic drift of this book.

Gärdenfors makes a tristinction among sensation, perception and imagination – a tristinction that will prove to be of central importance for the issues to be discussed below. 'Sensations', Gärdenfors writes, 'provide an awareness of the world' in the sense that they tell the organism having the sensation what is happening to it at the time it 'has' the sensation.[53] And sensations 'often involve an (unconscious) *evaluation* of whether what is happening is good or bad' – that is, the sensations are what gives the organism 'reasons' to flee, eat, fight and so forth. Still, sensations are 'immediate sensory impressions',[54] meaning that they are not, in themselves, representations or experiences of something specific. Gärdenfors writes that 'one important thing to notice is that I can have a sensation without knowing *what* gives me the sensation'.[55]

I take this to mean that an organism can have sensations without being aware of having sensations, nor of what *kind* of sensations (pain, hunger, lust and so forth) it is having. At the level of sensation an organism is simply, and only, aware of the world in the sense that it is affected – it is not (yet) capable of representing this awareness as 'awareness of ...' and even less as 'I am being affected by ...'. Given this interpretation of Gärdenfors's argument, it is somewhat misleading when, quoting N.K. Humphrey, he 'proposes that we replace [the Cartesian *cogito-ergo sum*] with "*Sentio-ergo sum*" – I feel, therefore I am'.[56] As far as I can see, the emergence of an 'I' would not be possible in an organism that *only* has this kind of sensory awareness of its world. Nor could we, in retrospect as it were, infer an 'I' 'having' the sensations from the fact that an organism, in order to be aware at all, needs to have sensations. But still – and in spite of the unfortunate formulation just quoted – it is quite clear that Gärdenfors does not endorse a position of this kind. His main concern is to establish that 'a minimum requirement for being conscious is to have sensations'[57] and, as a consequence, that 'our

bodily experiences constitute a foundation for all types of conscious thinking'.[58] No free-floating mind, no disembodied soul, but rather an incorporated awareness.

To have a sensation is not to perceive something, but it is to have what it takes to be able to perceive, and then, eventually, become conscious of being conscious. A first step on this route is for the organism to receive 'signals about *what is going on out there in the world*' so that it may 'foresee the future and thus survive in an inhospitable world. This is the role of *perceptions*. First and foremost, perceptions provide information about the spatial structure of the world and what physical objects are in it'.[59] It is in this connection that Gärdenfors introduces his highly productive and multilayered concept of simulators.

According to Gärdenfors, a simulator is what makes it possible for us conscious beings to present our sensations as representing the world in which we are living. This concept of 'a kind of *simulator* [that] has been created in the brain' is introduced in an interesting and completely immanent manner. As a starting point for a description of what it means to throw something, Gärdenfors uses the experimentally established fact that primates do not know how to aim when throwing. He describes the problem of the slow feedback from the muscles to the brain – so slow, in fact, that it makes aiming while throwing impossible, unless there is something in the brain that speeds up the process. He writes:

> This is where the big news comes in. A kind of simulator has been created in the brain that quickly estimates what the *anticipated* result of the signals to the muscles will be. ... The calculation loop in the simulator is faster than the loop that goes via the body's muscles. It has been estimated that the brain can actually correct a signal it has sent to the muscles within 70 milliseconds. That is significantly faster than the 200–450 milliseconds it takes for the signal to reach the muscles and return. So the simulator manages to adjust the arm's movements during the throw much more quickly than what one can accomplish with the muscular feedback. The faster you throw a projectile, the less time you have to steer your arm. Without such a simulator we would not be able to solve the problems involved in the art of aiming. But we do not know exactly how the simulator is implemented in the brain.[60]

We may thus conclude that the perceptions we have of the act of throwing are simulated, that they actually are representations of the

act of throwing, and that we are not, as it were, at all aware of the act in and of itself. This goes for all perceptions – they are in fact always 'sensations that are *reinforced* with simulations'.[61] However, this is not all that simulators do – the decisive move is made when Gärdenfors continues:

> One important property of a simulator is that it does not need to rely exclusively on signals coming from the sense organs: it can also *add on* new types of information that can be useful in simulating. It does not matter much if this information has no counterpart in the surrounding world as long as the simulations produce the right result, i.e. lead to the appropriate actions. This way the simulator's output will be richer than the influx of sensations.[62]

One immediate epistemological implication of this is worth some further attention. If Gärdenfors is right in assuming that our brains actually produce what we perceive on the basis of sensations – and there is no obvious reason to doubt this – then we nevertheless find ourselves in an awkward situation regarding the status of these very sensations. Adhering to my interpretation of Gärdenfors's concepts of sensation and perception, we can never (according to Gärdenfors's theory) perceive, let alone experience, a pure sensation. As soon as we become aware of pain, hunger, warmth or cold and so forth, we are always already in the domain of perception – we are perceiving, that is representing, *something as* pain, hunger, warmth and so forth. It may be the case that we have sensations without perceiving them – as in the example mentioned by Gärdenfors[63] in which we do not experience the sensation of the pressure against our thighs of the chair we are sitting in until we focus upon this sensation – but then we nevertheless have to construe the experience of the sensation of pressure *as* an experience that *could* have been made earlier or later, depending on the focusing of our attention. This procedure makes the constructed aspect even of the sensation quite apparent.

In a way then, sensations appear to be just the constructs we need to make sense of our human experience of the world – that is, we need the concept of sensation to explain how our bodily experiences can 'constitute a foundation for all types of conscious thinking'.[64] This critique (if it really is a critique at all) is by no means fatal for Gärdenfors's position, but it definitely raises the question of the status of the demarcation between sensation and perception.

When stating that there may be a tension here in Gärdenfors's stance, I am referring to the immanent way in which he is construing his theory. He is constantly arguing without evoking any support outside the world of experience. That is, he does not refer to objective properties of the world *in and of itself* as an ultimate guarantee for the validity of what he is saying. He only refers to the world of experience, and the world of experience is made up of perceptions. Part of the perceptions are perceptions of sensation; that is, phenomena that seem to be universally present in human experience, and to some extent, as shown by various experiments, in that of other animals as well. Gärdenfors needs the concept of sensation as a 'counterpart' to the affections that organisms are subject to in the world, and to incorporate the notion of a world that affects us – but he never suggests that this world is what we traditionally would call the Real World. In fact, he happily admits that the world we experience is a construct:

> The brain is full of mechanisms that contribute new information.[65] In particular, there are many well-studied examples of the visual process. When we see an object, we sense it has *contours*, for example. But if we examine the influx of light upon the retina, we find nothing that corresponds to such contours – they are part of the information that the visual process *constructs*.
>
> [W]e have plenty of simulators that *complement* the signals provided by our senses. Such complementations create the *representations* with which thinking works, since what we experience is not only that which is presented by our sensory receptors but also that which is recreated, i.e. represented by our simulators. The filled-in representations are what I call perceptions. In other words, perceptions are *constructions* of what is going on around us.[66]

In a note a bit further on in his book, Gärdenfors talks about causes and causation and sums up his position as: 'In philosophical jargon my position could be described as neo-Kantian, i.e. I believe that causation is one of the categories of our thought, but the contents of this category may vary from culture to culture'.[67] In describing himself as neo-Kantian, Gärdenfors is making explicit the affinities between his version of cognitive science and the philosophical anthropology of, for example, Ernst Cassirer, to whom I will later return.[68] (In the section 'Doing with symbolic forms' I will, using the notions of materiality and embodiment, somewhat enlarge, shift and complement, but not

really contradict Gärdenfors's exclusive focus upon representations as that with which thinking works.)

The third part in Gärdenfors's tristinction, imagination, is presented as the final and third element needed for the construction of an inner world:

> Imaginations (or images) ... are not directly governed by sensory impressions. I will also call them *detached representations*. Imaginations and representations are the elements from which the inner world is constructed.[69]

For Gärdenfors, imagination is basically what allows us human beings to make plans, consider possibilities and create projects in an autonomous way, not directly involving our bodies. He writes:

> Actually, there is only a little extra step for the evolutionary process to let the simulators [in the brain] work without any signals being sent to the body at all – the simulator is *detached* from the sensory and motor systems. This is what happens when the organism creates for itself an *image* of what will happen if a certain action is undertaken. In the remainder of this book I shall argue that the power of imagination is completely decisive for all development of higher thought processes.[70]

With this notion of imagination, Gärdenfors's position seems to coincide with that of another philosophical anthropologist working in the wake of Kant, Cornelius Castoriadis. Imagination, the latter claims, is what makes it possible for human beings (and perhaps also for some of the higher primates) to refuse the heteronomy of the sensory world, and consciously create a world of our own. Each organism is autonomous in the sense that it will always have its own world. Its *Umwelt* is species-dependent. (An urchin deals only with urchin things, as Jakob von Uexküll, frequently quoted by Cassirer, would have said.) Man is, of course, autonomous in this sense, just as any other organism is. But, according to Castoriadis, the full sense of autonomy comes first with imagination and the possibility of consciously creating and institutionalizing (in behaviour, language, representations and so forth) social imaginary significations for and in our world.

With the introduction of imagination, I leave Gärdenfors and his fascinating book, since I will come back to imagination, its role and

possibilities many times. There is, of course, much more to be said about human evolution, perception and imagination from the perspective of Gärdenfors, but hopefully the main argument is clear: We cannot conceive of perception as a neutral registration of what is out there, nor can we count on our perception for reflecting the world as it 'really' is. Perception is culturally and biologically determined through and through, being a prime example of the collapse of every rigid distinction between nature and culture. It is necessary to take this into account when we talk about knowledge, about producing knowledge in and of our world. Whatever we may know, it is in this sense always already part of doxa.

Finally, this brings us back to the caves, to the contemplation of what it takes to get the eye in, and to the question of what we can see and perceive in the caves. We recall Clottes and Lewis-Williams's statement, quoted above, about people who had never visited a cave but still were able to 'immediately recognize the photography of a painted bison or of a chamois for what it is, that is a representation of an animal by a prehistoric artist, be that notion vague and imprecise'. It is clear that whatever a *photograph* of a painted bison might be it is *not* a representation of an animal by a prehistoric artist. But apart from this, the mimetic, universalistic approach represented by Clottes and Lewis-Williams may perhaps seem convincing. It only makes sense, however, if the remarks concerning our active role in constructing the seen and the perceived – in the caves as anywhere else – and concomitantly our activity in creating the objects of our perceptions are ignored.

To explain the fact that pictures of cave art are readily seen *precisely as* pictures of cave art, the authors point out that we 'in our culture' have all seen images of cave art in books and journals. We have seen stamps with aurochs from Lascaux, different logos made from prehistoric motifs and so on. So far, so good (as long as one accepts being included in this rather specific 'we'). However, Clottes and Lewis-Williams continue with the following claim:

> It is this kind of memories, a bit vague, that nourish our perception. They allow us to establish the category "prehistoric art" *where we instinctively range these figures*. This is all the more remarkable since, in this domain as in others, – for reasons of survival – Nature has not originally programmed us to perceive similarities but rather to notice unlikeness, to notice the exception rather than the norm. Thus, if we react differently when confronted with ice-age art, it is because this art presents a striking unity.[71] [emphasis mine]

The aim of Clottes and Lewis-Williams all through their book is to make a case for the universal validity of a shamanistic interpretation of prehistoric rock art, and this argument has to be seen in this light.[72] Nevertheless, I find their arguments quite characteristic of *the mimetic curse* in rock-art studies in general. This being, in this case, the stubborn conviction that to see something is simply to reflect a pre-existing something – no additions or subtractions made. Such conviction, as is apparent in the text just quoted, may very well exist alongside an equally firm conviction that the categories of perception are culturally dependent. It is as if the cultural production of categories of perception – like the category 'prehistoric art' in the text just quoted – is seen as the natural reflection of our 'natural programming', to use Clottes and Lewis-Williams's phrasing. This allows for a strange argument, presented by the authors, which may be summarized as follows: First, everybody who sees a picture of a cave picture recognizes that it is a representation of an animal by a prehistoric artist. Second, this is because 'we' have (in 'our culture') the same perceptual category – prehistoric art. Third, we instinctively arrange all pictures of cave art in this category. Finally, since we naturally tend to focus on differences, the fact that we arrange images of cave art in the same category gives us reason to think that this art has a strong inherent unity.

This argument does not strike me as very convincing, as it is an almost classical example of begging the question. Naturally the objects that we call prehistoric art will show a strong resemblance to the objects we call prehistoric art – but that is, as I have tried to show, not necessarily a result of the resemblance of properties amongst the objects thus called. The resemblance may very well be the product of the act of categorizing, the likeness created rather than reflected. Remember Sanz de Sautuola's creative mental leap, connecting portable Palaeolithic art with mural Palaeolithic art and, eventually, making it possible both to see and perceive the paintings in the caves.

However, since Clottes and Lewis-Williams – and in this they are archetypal for their discipline[73] – tend to think of the act of perception as an immediate, intuitive and (above all) mimetic reflection of the perceived object and its properties; they have no trouble whatsoever in transforming a socially and culturally created unity (the 'prehistoric art') into a natural, objective and therefore universally valid and observable likeness of objects. The structure of the argument is Platonic through and through. It is apparent at many levels, ranging from the

tendency to overlook the materiality involved in perception – as seen in the strange blindness to the difference between (seeing an) actual painting in a cave and (seeing a) photograph of the same painting – to the conviction that our categories of perception ultimately correspond to pre-existing properties of the world. Here, Plato once again lurks in the shadows. But that should come as no surprise – we are, after all, talking about images in caves.

Gärdenfors has given us good reason to believe that we humans, without any conscious intention to do so and due to our very biological makeup, do create our perceptions and experiences; that we, already at a very basic level, make and create the representations with which we think and perceive our world. We have seen that the notion of mimetic, figurative representation is far too crude and misleading to be of any use in explaining the mechanisms involved even in our most straightforward and simple experiences. In my criticism of Clottes and Lewis-Williams, and their attempt to establish the natural unity and universal 'recognise-ability' of the cave art, I have tried shift focus a bit – from the explanations offered by cognitive science to a more semiotic approach. Seemingly this approach also yields the same results – that we humans make our world in making the measures (the perceptions, the concepts, the categories, the practices, the rituals, the habits and so forth) for this very same world.

One way of making measures is to produce theories about what we see and about the sense of the seen. From this point of view, cave-art studies is an interesting field in many ways: The material is abundant and very suggestive, yet there is no consensus about a sufficiently specific context that allows for a unanimously accepted interpretation. Its field of study incorporates methods and actors from different disciplines – ranging from art history and philosophy, to sociology, archaeology and ethnography. Due to its multidisciplinary affiliations, it is a rather flexible field when it comes to incorporating new theoretical approaches, which makes it a good place to observe the theoretical changes within the human and social sciences during the twentieth century. It is a relatively young field of study, but still old enough to have created, using Bourdieu's term, field-specific history, practices, canon and so forth. These factors – to mention only the most obvious ones – make it especially interesting from a doxological perspective. In this book, I will give no more than a sketchy outline of what a doxological study of cave-art studies could be – a thorough disciplinary

study of the field would require a more wide-ranging approach than the one chosen here. Instead, I want to introduce a doxological approach to the different attempts in cave-art studies of making sense of the traces in the caves, and of the way in which the field of cave-art studies has constructed its own history. It is time to look at the validity of interpretations.

6
Caves

The validity of interpretations

After the consecration of Palaeolithic mural cave art in 1902, the academic disciplinary history of cave-art studies is basically a story of multiple efforts at making sense of the material at hand[1] – efforts ranging from the most simple explanations (the making of cave art was just a pastime in between other activities) to the most elaborate (cave art as a complicated multilayered 'language'). This history is intimately connected to changes, struggles and epistemological conflicts in the human and social sciences of the twentieth century. Consequently, as the field of cave-art studies consolidated itself on, rather than within, the boundaries of archaeology, anthropology and ethnography, what Bourdieu calls 'field effects' soon began to appear – that is, works that talk about the field, contribute to writing its history and thus play a part in forming its identity.[2] Prehistorian Marc Groenen writes about the constitution and birth of the discipline:

> But this long course of events, leading from André Brouillet who unearths the engraved Chauffaud-bone just after 1834 and the young Maria de Sautuola who noticed the bison of Altamira in 1879 to Emile Cartilhac and his *Mea culpa d'un sceptique* in 1902, represents the gestation and the birth of a new discipline about which one may say, even at this moment, that it still remains to be constructed in its entirety. Everything must be marked, collected, published and interpreted.[3]

The pioneering works of Henri Breuil, his theories and especially the reproductions from the caves he visited and investigated, came to

constitute the core of the discipline in the first decades of the twentieth century and, in many ways, up to the 1960s. In 1962 Annette Laming-Emperaire published her thesis, *La Signification de l'Art Rupestre Paléolithique*, in which she gives an authoritative presentation of 'the hypothesis and theories regarding the signification of Palaeolithic cave art' up until her own contribution.[4] In doing this she sets the form for and also defines, to a large extent, the content of the history of the discipline – if one is to judge from contemporary publications engaging in similar overviews, including Bahn and Vertut's *Journey through the Ice Age* (1997) and David Lewis-Williams's *The Mind in the Cave* (2002). Thus, the new discipline was born in France, and remained an almost exclusively French affair, at least until the end of the Second World War. In 2003 Emanuel Anati – who, while adding a few extra details, also reproduces the structure introduced by Laming-Emperaire regarding the history of interpretations – writes that

> the first studies of the signification of prehistoric art were made by French researchers. Recently, this interest has extended to other countries and continents, but the French research has kept its supremacy. Not long ago, due to the then prevailing idea according to which prehistory was a regional discipline, the academic *establishment* regarded with perplexity the comparisons between the Palaeolithic art of Western Europe and the art of archaic hunters of non-European regions. The main hypotheses about the motivations for the most ancient artistic production deals essentially with European Palaeolithic art, but other theories have been formulated since then.[5]

Since my intention is neither to write the history of the discipline of cave-art studies, nor to present an exhaustive discussion of all theoretical attempts within the field, I will not venture an in-depth discussion of Henri Breuil, Max Raphaël, Anette Laming-Emperaire or André Leroi-Gourhan (just to mention a few) and their respective contributions. Instead, I will content myself with a critical discussion of some aspects of the most important theories, especially those relevant to doxological concerns. Finally, an attempt will be made to describe what I find to be the dominant doxa of the field, at least when it comes to perceptual and epistemological matters.

Let us then, very briefly, summarize and retrace the main features of the structure established by Laming-Emperaire and comment upon some of the different suggestions that have been made about the possible significance of cave art.

Art for art's sake

As soon as the doubts about the authenticity of the Palaeolithic mural cave art dissipated, the question of its significance became unavoidable. Not surprisingly, the first attempt to make sense of the strange act of painting in the deep places of the earth did not focus upon the paintings themselves.[6] The motives for, and the form of, the paintings were seen as evidently stemming from the everyday experience of the prehistoric man and, hence, as unproblematic. The fact that he – for there never was any real question about the gender of the painters, nor was there up until the 1980s – painted at all was explained in two steps. First, that game was plentiful during the period when the paintings were made, leaving much spare time to be filled with some recreational activity or other. Second, a presumption was made about man's innate desire to create art. The combination of these two assumptions made the answer almost obvious. Since man has the desire to create art (meaning, in this context, 'beautiful things'), and since the Palaeolithic man had an abundance of time to do so, he simply did. He created art for art's sake, just for the fun and pleasure of it.[7]

This explanation leaves, to say the least, some questions unanswered. As Bahn and Vertut put it: 'The theory tells us more about its proponents' reactions to Palaeolithic art than about the artists'.[8] Why would man, even if he had the time, take the pains of venturing deep into caves to paint – bringing with him all the material needed for lightning, painting and getting around, and often to paint in very inaccessible places? And is it really true that man has this eternal aesthetic desire for making disinterested art? Here, a small digression is necessary.

The uncanny modernity of cave art

Popular notions die hard. Consequently, one also finds an abundance of references to man's aesthetic needs or desires in recent attempts at understanding cave art. For example, in 2006 author Gregory Curtis wrote that

> the cave painters may not have had the idea of art as we understand it, but when they chose to draw an appealing line instead of an awkward one, they were thinking and acting like artists trying to create art in our sense of the word. ... The multicoloured and stylized Chinese Horses in Lascaux, the pride of the hunting lions with their eyes ablaze in Chauvet, and the weighty, yet delicately

> curving bison in Altamira and Font-de-Gaume all prove that beauty truly is eternal.[9]

Curtis is not quoted here to make fun of him or of his work (his book is both well thought-out and well-written, one of the best that I have encountered in the semi-popular genre, where you tend to find most books on cave art not written by specialists for a specialist audience),[10] but to highlight something both very problematic and probably inevitable when one deals with mural cave art (apart from the doxologically completely untenable notion of art and beauty as eternal in some way). Curtis formulates the problem in this way: 'How is it that they [the cave paintings] could be locked away in caves, unknown or misunderstood, for eons and yet, once discovered, fit naturally in the Western cultural tradition?'[11]

However, the lines of reasoning I have put forward thus far show clearly that this natural fit Curtis mentions is not that natural after all: Seeing cave paintings is (as is seeing any other object) a question of organizing what you see in a form that makes sense to you. In the case of complex objects (like cave art) this organizing presupposes acquiring a concept, or more likely a set of concepts, and this acquisition is undeniably a social matter. So the fact that we now, after Sanz de Sautuola's mental leap, readily see the paintings in the caves does not really tell us anything about what the painters say 'to us so directly across the millennia'[12] – but it does raise the following question, expanding on Curtis's formulation: How is it that these paintings are so accessible for us, so similar in style to many in the Western pictorial tradition, despite their antiquity and despite there being (as far as we know) no connection between the latest cave paintings and the earliest beginnings of the Western aesthetic tradition?

From a doxological point of view, the answer is not to be found in the postulation of an eternal sense of beauty or a natural aesthetic instinct in man, nor in some presupposed 'realism' in art that would be universal and, hence, explain the similarity. Following a strand in Castoriadis's thought, I would say that the forms created by prehistoric man have the (admittedly somewhat eerie) quality of being easy to recognize and, hence, to make sense of, for us today – at least up to a certain point: We who, in one way or another, partake in the Western pictorial tradition of the early twenty-first century, given the concepts of depicting and art that this tradition procures, readily see the traces in the caves as pictures of different animals that we are more or less familiar with – that much is clear. But this easiness seems not to be fully explained by the creation

of the concept 'mural cave art', nor by the hundred years of cave art research separating us from the pioneers of the early twentieth century; there is something more to it. Already when Sanz de Sautuola first presented the images from Altamira they were, without any hesitation, categorized and seen as aesthetic objects depicting animals, albeit they were considered to be fakes. The very interesting, and rather puzzling, point is that our entrenched perceptual tradition so readily presented a 'closest match', a set of Western aesthetic concepts on which to graft the perception of the objects found in the caves. The same kind of effortless matching seems not to be present in the case of, for example, the rock paintings in Australia, at which Clegg's example hints. Moreover, this easy matching seems not to be of any help, but is more of a perceptual and epistemological impediment when it comes to understanding the why and the wherefore of the images in the caves.

Thus the core of the question remains: How come these traces are so easily integrated into our conceptual schemes? Part of the answer lies no doubt in what we share with the cave painters – that is, our belonging to the human race, our being Homo sapiens, having hands of the same size, bodies of nearly the same size and so forth, as well as having sensations and perceptions specific to our species. But this seems to be only a minimal, though necessary, precondition, not explaining a great deal. Gärdenfors writes, with direct reference to cave paintings:

> It is not clear what was the earliest way of storing knowledge in the external world. ... Another form is pictures that we find for example in cave paintings, rock carvings, and ceramic patterns. Such objects presume that one can create rich representations of the pictures *before* they are placed in the outer world. For example, the 15,000-year-old animal images in the paintings of the cave of Lascaux must have been painted without having any model available.[13]

Gärdenfors points to an important link between us and our forbears – our common ability to externalize our inner world in different kinds of media and symbolic forms. But, as has been suggested earlier in the book, I am not convinced that man must have always had a full-blown inner representation *before* placing it in the outer world. The external 'representation' could just as well have been an efficient part of creating the imagery and the pictorial concepts. It could be a question of co-birth and presentation of a way of seeing and thinking, rather than some kind of representation of an inner concept or idea. (Also, see below, the last three parts of section 7). And anyway, this is

in itself not enough to explain why we so easily recognize mural cave-art images, and not so easily other forms of prehistoric art.

The art historian Max Raphaël gave this idea a curious historical touch. He suggests an analogy between our position (that is, the position of mankind during the Second World War) and the position of the cave painters. He writes,

> if the cave paintings strike us as being modern in conception, and therefore familiar, the reason is that they were produced in a unique historical situation and are a great spiritual symbol: for they date from a period when man had just emerged from a purely zoological existence, when instead of being dominated by animals, he began to dominate them. ... The Paleolithic paintings remind us that our present subjection to forces other than nature is purely transitory; these works are a symbol of our future freedom.[14]

It is clear that Raphaël's answer is profoundly impregnated by the concerns and problems of his own time. We may find it a bit naïve and not really illuminating as to the question it tries to answer. But the much more recent attempt at an answer by Gregory Curtis is hardly more convincing. He writes:

> The paintings speak to us directly across the millennia because they are the conservative art of a stable society, because they have a comic rather than tragic view of life, and because they are part of a classical tradition.[15]

Curtis devotes the last chapter of his book to argue for the validity of his thesis, focusing on important aspects of the cave art (most notably that its repetitive qualities suggest a constancy in social practices that must have been satisfying for the Palaeolithic man), but his arguments still seem to be gratuitous – especially when it comes to seeing 'the cave paintings as scenes of comedy, not tragedy'.[16]

Nevertheless, the examples of Raphaël and Curtis teach us three things: to be wary not to project onto the walls of the caves what seems to be evident to us at a certain conjuncture in time and historical space; to keep our desires for a universal taste for beauty in check; and to be careful in choosing our concepts and topoi when talking and thinking about cave art – they may bring on more than we bargain for. So how, then, are we to understand the accessibility of the Palaeolithic art? I am sorry to admit that I have no ready answer. Doxologically speaking,

the answer would have to be sought in addressing the conditions for our perceiving anything at all in the caves, and more specifically in our Western tendency to recreate the traces in the caves as primarily *aesthetic* objects, that is, as art. Above, I have evoked the somewhat heated debate concerning the use of the term 'art' in this context, and I have also suggested some strategic ways of dealing with it. These suggestions may, hopefully, also prove to be of some relevance when dealing with the question of the undeniably uncanny modernity of cave art.[17]

Hunting magic and totemism

When the 'art for art's sake' explanation was found wanting, the next step – remember that we are in the beginning of the twentieth century, when Sir James George Frazer (and his *The Golden Bough*) still was one of the more influential thinkers in the anthropological domain – was to see if an explanation based on sympathetic magic would fare better. According to Laming-Emperaire, the article written in 1903 by the prehistorian Salmon Reinach – 'L'art et la magie' – opened the way for a more profound explanation of the pictures in the caves.[18] Most importantly, she writes, did Reinach initiate 'a new mental attitude that was to become that of the researchers of the 20th century: henceforth the prehistoric art was considered to be the material trace of a number of beliefs and rites whose equivalents it is possible to find among the primitives of today. All attempts of interpreting prehistoric art were founded in comparative ethnography'.[19] Thus, the 'argument by analogy' (i.e., that we can understand the way of living and thinking during Palaeolithic times by comparisons with supposedly 'primitive' cultures living in more or less the same way as we think our forbears did) was established in cave-art studies. This argument has been much criticized, and on good grounds – not least for the colonialist perspective it may convey and uphold – but, like the art for art's sake explanation, it lingers and, from time to time, also still pops up in contemporary attempts to make sense of Palaeolithic art. I will return to this argument shortly, in connection with one of the most recent attempts at interpretation.[20]

The new attitude that Laming-Emperaire talks about was embraced and further developed, most prominently by Breuil, into a theory of mural cave art as completely explained by hunting magic: Why paint horses unless it is seen as a way of increasing their numbers? Why paint a bison, if it is not seen as a way to ensure good hunting?

Breuil and his thoughts were to dominate prehistory and especially cave-art studies in France until after the Second World War. Summing up the alleged advantages of the hunting-magic hypothesis, Lewis-Williams writes:

> At first the explanation seemed to explain why so many of the images were hidden in the dark chambers: magic would be performed out of sight. Then, too, the explanation seemed appropriate to the species depicted in the caves. When images of felines and other dangerous animals were found, ones that it seemed unlikely people would consciously hunt or want to increase, Breuil explained their presence by saying that the artist hoped to acquire the strength or the hunting skills of the predators. The elasticity of the explanation did not end there. Quadrangular signs ... were said to depict traps into which animals would fall. Other signs were taken to be hunters' hides or dwellings of spirits.[21]

But the elasticity of the hypothesis could not hide blatant contradictions such as, for example, that most of the animals that were actually hunted and eaten during this period are not, or only rarely, depicted in the caves, while others that were not hunted at all, or barely ever hunted, appear in the caves.[22] Nor does it give us any hint whatsoever as to understanding why the pictures were made *as* they were made – why their 'style' is what it is.[23]

So, if hunting magic cannot explain the why, the content or the form of the pictures in caves then, or so it seemed, one had to turn to totemism. According to this hypothesis, the pictures in the caves should have staged conflicts, alliances, cooperation, inclusions and exclusions of different tribes, represented by different totemic animals such as 'the bear clan', 'the horse clan', 'the bison clan' or 'the mammoth clan'. The only problem with this approach is that there seems to be no conclusive (whatever that could mean in this context) evidence to be found for or against totemism. According to Laming-Emperaire, who does not seem to regard the theory of totemism as a possible candidate for the status of scientific explanation, what we find in the caves 'seems to be irreconcilable with what we know about contemporary totemism'.[24]

Structured messages – art as language

According to the current consensus of the field, the aforementioned art historian Max Raphaël was the first who stopped seeing the Palaeolithic

mural paintings as pictures in isolation, and started looking for a pattern or a composition in the make-up of the caves.[25] He states his position quite clearly on the very first page of his 1945 book, *Prehistoric Cave Paintings*:

> It has been said that Palaeolithic artists were incapable of dominating surfaces or reproducing spaces: that they could produce only individual animals, not groups, and certainly not compositions. The exact opposite of all this is true: we find not only groups, but compositions that occupy the length of an entire cave wall or the surface of a ceiling; we find representations of space, historical paintings, and even the golden selection! But we find no primitive art.[26]

Raphaël's position in the field is quite unique. Other than the book quoted above, he did not publish any major work on the subject, but he corresponded with Breuil and Laming-Emperaire (see below). In a large number of surveys of the field, he is said to be unduly forgotten – and hence he is not forgotten at all, at least not anymore. For example, Groenen, Lewis-Williams and Curtis all give initiated and mostly positive presentations of his work and theories;[27] he is mentioned by White and by Bahn and Vertut as an important precursor to structuralism; and Anati, in his very dense survey, lists Raphaël as an inspiration for 'la methodologie structurale'.[28] So, it appears that we have encountered another field effect here – the objective consensus about the importance of a specific author, not so much due to what he actually did or wrote (as is the case with Breuil, Laming-Emperaire, Leroi-Gourhan and many more), but as to what his thoughts initiated, made possible and still make possible. Raphaël seems to be a name around which it is possible, today, both to construct and uphold the doxa of the field, as well as with which to challenge at least some parts of it.

To me, Raphaël's book from 1945 is a strange mixture of, on the one hand, acute observation and critiques – the one cited is but one example – and on the other quite arbitrary interpretations presented with force and conviction. Laming-Emperaire even goes so far as to say that his work 'is unfortunately not possible to use', commenting that 'the thesis about totemism is adopted without any real demonstration, without ethnographical examples and without critique of this ethnographical method. The hypothesis concerning the historical signification of the representations is also adopted without

discussion'.[29] To this critique one may add a number of rather gratuitous connections, as for example what Raphaël says in the process of establishing his own version of totemism:

> Ibsen said that that in every human face one can see an animal which discloses the deepest essence of its possessor's soul; likewise, in every animal of the Paleolithic paintings (and even more so in every animal species) there is the face of a human or a human group which reveals its fundamental needs and motive forces through the animal.[30]

So, despite the obvious interest of Raphaël's basic position for a structuralist reading of the caves, Laming-Emperaire's laconic statement – 'It is difficult to follow Raphaël in his conclusions'[31] – is quite understandable.

Lewis-Williams sees this somewhat differently. He writes that Laming-Emperaire, in her book on Lascaux from 1959 (preceding her thesis by three years)

seems to follow Raphaël in a number of important ways. She

- questions the value of ethnographic parallels,
- argues that the difficulty of access to many subterranean images pointed to 'sacred' intentions,
- rejects any simple form of totemism,
- proposes that the 'the mentality of Palaeolithic man was far more complex than is generally supposed', and
- argues that images should be studied as planned compositions, not as scatters of individual pictures painted 'one at a time according to the needs of the hunt'.[32]

Lewis-Williams suggests (rather than states) that Laming-Emperaire might have refrained from mentioning the Marxist Raphaël in her book on Lascaux because of the cold war. This seems rather far-fetched since, as we have just seen, she discusses him and his theory in her thesis only three years later when the cold war was by no means over. Thus. it is hard to follow Lewis-Williams when he presents her rejection of Raphaël's theory in her thesis as an 'inexplicable *volt-face*'.[33] I would rather see Lewis-Williams's siding with Raphaël as a strategic move in order to prepare the ground for his own theory.

Marc Groenen, who obviously sees some problems in Raphaël's theory, admits that his conclusions may 'make us smile' but that he,

Raphaël, was quite aware of their precariousness and that he saw them more as illustrations than as conclusions.[34] Be this as it may, Groenen continues, the important thing is that his fundamental idea, about the structure of Palaeolithic art as intentionally created ensembles rather than individual works, remained.

This idea was indeed developed into full-fledged structuralism in the work of Laming-Emperaire and, most famously, André Leroi-Gourhan. Together they were to occupy a central position in the field of cave-art studies in France, from the early 1960s up until the general decline of structuralism in the 1980s.[35]

Leroi-Gourhan advanced his theory of mural Palaeolithic art as being about the 'language of prehistory'.[36] He claimed that this 'language' was based on binary oppositions such as male-female – represented by, for example, depictions of horses and 'straight' signs (male) versus bison and 'rounded' signs (female)[37] – and he tried to uncover the syntax of the caves, paying great heed to the cave as a structured space with different areas (entrance, passages, halls, corridors, end) with different functions. Leroi-Gourhan based his approach on an extensive statistical survey of the material available at the time,[38] and he hoped (and sometimes claimed) that his theory would have a predictive value. Lewis-Williams, who acknowledges Laming-Emperaire and Leroi-Gourhan as the 'two researchers who ... made the greatest twentieth-century contribution to the study of Upper Palaeolithic art',[39] recounts a conversation he once had with Leroi-Gourhan:

> He felt that, in a cave he had never before entered, he could foretell the presence of, say, a horse to complement an image of a bison that he had just been shown – to the astonishment of his guide. But he registered an important reservation: he believed that the horse:bison::male:female opposition was only one characterization of the mythogram. For him, the mythogram was a *vehicle* that could carry a wide range of meanings.[40]

The importance of Leroi-Gourhan's work and legacy in cave-art studies, as well as in archaeology and prehistory at large, can hardly be overstated. It will suffice to mention that he revolutionized the methods of excavating by 'rotating the axis of an archeological dig by 90 degrees'[41] and thus, in a truly structuralist manner, initiated a focusing on the horizontal relations between the findings and making it possible to reconstitute the life of prehistory, not just unearth interesting objects.[42]

But even though the structuralist contribution likewise revolutionized cave-art studies in shifting focus from 'what' (is depicted) to 'how' (it is it made; what structure the findings on the cave walls do display), the theories of Leroi-Gourhan could not sufficiently account for new findings made. Newly found caves did not display the syntax that Leroi-Gourhan's theories predicted, and everything found on the cave walls could not be explained by simple binary oppositions such as male:female; nor was the basic contention of Palaeolithic art as being structured around a sexual opposition very convincing. Structuralism was successively abandoned in cave-art studies as elsewhere within the human sciences.[43]

Art as reports of shamans

After the end of (the predominance of) structuralism – say around the mid-1980s – there was, for a time, a tendency to abandon altogether the search for the meaning of the paintings. This period may perhaps be characterized as the return of positivism in cave-art studies. Seeing that so many scholars had tried and failed, there was a tendency to simply put the question of meaning aside, restore the allures of hard science to the discipline and go for the facts: What animals are depicted where? How many?[44] But, of course, even a positivist attitude implies quite a large amount of interpretation, and in the turmoil of post-structuralist and postmodernist thought, this attitude did not last for long. The time was soon ripe for another attempt – the theory presented by Jean Clottes and David Lewis-Williams in their 1996 book, *Les Chamanes de la Préhistoire*.

Clottes and Lewis-Williams clearly state that they are not the first to suggest a shamanist interpretation of cave art, but they do claim to be presenting a new foundation for seeing the paintings in the caves as reports of shamanistic activities.[45] They found their argument on two basic premises:

First, the assumption that the human nervous system (that is, the nervous system of Homo sapiens) is basically the same today as it was around 40,000 years ago. This, in turn, would guarantee that if we can have hallucinations today, then so could (and did) our forbears.[46] In Clottes and Lewis-Williams's version of shamanism, the purported different stages of altered consciousness during the shamanistic trance play an important part. According to the authors, 'neuropsychological research in laboratories have shown that one can distinguish between three major stages with possible overlaps'.[47] During the first phase, the

subjects entering the trance are supposed to 'see' geometrical forms 'like points, zigzags, grids, collections of parallel or meandering lines or curves'.[48] In the second stage, the subjects

> try to rationalize their geometrical perceptions. They transform them, in their illusions, to objects loaded with religious or emotional significance, sometimes depending on the state of mind of the participant. Westerners, for example, may interpret a round and luminous form as a cup of water if they are thirsty or as a bomb if they are afraid.[49]

To reach the third stage the subject has to pass through a 'vortex', into which it is drawn and at the end of which there is a bright light. In the vortex the subject has its first real hallucinations and, once emerged, enters 'into the bizarre world of trance: monsters, humans and environment are intensely real'.[50] Clottes and Lewis-Williams contend that since these different stages depend upon our nervous systems, we are entitled to believe that our Palaeolithic ancestors had the same kinds of illusions as we and, given that shamanism was practiced during the Palaeolithic period, we may identify the different kinds of pictures and signs in the caves as 'reports' relating shamanistic trance experiences.

Consequently, the second basic assumption is that shamanism is ubiquitous in the hunter-gatherer societies. And this ever-presence is not 'the result of a diffusion of ideas and beliefs in the world, but is partly the result of an unavoidable need, within the hunter-gatherer societies, to rationalize an universal tendency of the human nervous system – that is, to attain altered states of mind'.[51] Based on these premises, the authors formulate a conclusion:

> Thus, we have every reason to postulate that certain persons, during the Upper Palaeolithic period, passed through the three phases leading to deep hallucinatory states and that these phases were ritualized and interpreted by groups of hunter-gatherers in ways that were compatible with their modes of life.[52]

According to Clottes and Lewis-Williams, the paintings, the signs and the engravings in the caves are interpretations and/or representations, effectuated by the hunter-gatherers, of the shamanistic experiences that they, or at least some of them, had passed through.

At first glance this theory seems to combine several advantages: the use of contemporary neurobiology as a scientific anchorage; the capacity

to explain both pictures and signs within one and the same framework; the explanation of different uses of different types of spaces within the cave (big rooms = collective shamanistic rites; small spaces = individual quests); the forceful explanation of why there are no pictures of landscapes or human dwellings and very few of the animals that were actually eaten: these were simply not part of the trance experience.

Within the field, the reception of this resurrection of the shamanist theory was not altogether positive, to put it mildly. In the introduction to *Chamanes et arts préhistoriques – vision critique* (2006), several leading researchers try to spell out their doubts and at the same time give their versions of the recent history of the field. In sum, this is what they say:

In the English-speaking world the debate started in 1988, when Lewis-Williams and Tom Dawson first suggested the idea of a shamanistic universal explanation of rock art as well as mural cave art in an article in *Current Anthropology* titled 'The Signs of All Times. Entopic Phenomena in Upper Palaeolithic Art'. But nothing happened in France, not even when Clottes and Lewis-Williams published *Les Chamanes de la Préhistoire* in 1996. The authors were surprised by the lack of interest shown by their French-speaking colleagues, which they interpreted as (in their own words) 'deliberate ignorance'.[53] Commenting on this reaction, the researchers who were co-signatories to the introduction just mentioned (Michel Lorblanchet, Jean-Loïc Le Quellec, Paul Bahn, Henri-Paul Francfort, Brigitte and Gilles Delluc) wrote:

> This absence of reaction in the land that has the largest number of ornamented caves was indeed surprising: The situation of the French research on Palaeolithic art was then very special. After the withdrawal and subsequent disappearance of André Leroi-Gourhan, who had dominated our discipline for several decades, as had Abbé Breuil before him and for an even longer period, a new era had begun. It allowed everyone to express their views more freely at seminars (organized at Musée de L'Homme by Denis Vialou) or within the working of the Groupe de Réflexion sur les Méthodes d'Etude de l'Art Pariétal Paléolithique [The group for reflection on the methods of study of the Palaeolithic mural art] (initiated by Michel Lorblanchet in Caberets).[54]

But this state of bliss did not last very long:

> The discovery of the French caves Cosquer and Chauvet, recently completed by that of the Cussac cave – a site of extraordinary

> importance in our discipline – had, paradoxically, a negative effect: They put an end to the ephemeral opening of the research through stirring up antagonisms that made the French researchers withdraw to their ongoing research, especially as one of the defenders of the shamanistic hypothesis occupied important administrative functions and determining editorial responsibilities within the domain of French prehistory.[55]

Commenting upon the publication of *Les Chamanes de la Préhistoire*, they even say that 'far from being a revelation, [this book] suggested a return to ethnographic comparatism, a procedure that had been largely criticized by contemporary authors, and to a totalizing interpretation that had already, in the twentieth century, been suggested in vain by several prehistorians'.[56]

All in all, the group of co-signators of the introduction portray the theory presented by Clottes and Lewis-Williams as a scientific disaster, a disaster that furthermore is supported by a general and highly mediatized popularity of shamanism 'flattering the public taste for the mysterious and the marvellous' and they conclude that the shamanistic interpretation of cave art 'is bereft of scientific foundation'.[57]

This is of course only one side of the story. One finds quite a different description of the recent history of the field if one turns to Curtis.[58] He concludes his very sympathetic presentation of Clottes, and his somewhat more restrained discussion of the shamanist theory, thus:

> But, unfortunately perhaps, the shamanistic theory has not inspired either many converts or new and productive skills. Still, *Shamans* is a brave book and an important one. Despite occasional excesses, it confronted the meaning of the cave paintings head-on and argued for an interpretation that was consistent within itself and with the facts presented by the caves. Yes, that interpretation was suggested by ethnographic analogy, but that in itself does not mean it is wrong. *Shamans* arrived, it was vilified, and now it is generally ignored by academics. Perhaps its day will come.[59]

With this, I close my brief exposé and discussion of some of the different attempts at grasping and explaining the images in the Palaeolithic caves. I have, without any ambition to tell the whole story, tried to reflect upon features related to the shaping and the structuring of the field of cave-art studies in the twentieth and the beginning of the twenty-first century – such as certain aspects of the way the history of the field

is written, the main theories discussed and some of the most obvious conflicts in the field, that is features related to the formation of the doxa of cave-art studies. Today the situation seems to be more or less like the one Curtis describes – after the shamanist theory, no new major attempt has been made at deciphering the cave art, nor have the old ones been completely surpassed.[60] This, I think, is particularly true of the structuralist approach, which still appears to be generating fruitful research even though the details of the theories presented by Laming-Emperaire, Leroi-Gourhan and others have been disproved.[61]

What it could mean to validate an interpretation

The short history presented in the previous section evolves around one central question: How are we to assess the validity of these interpretations today? I will not, however, say more about the details of the individual suggestions than I already have. I fear that, in spite of my attempts at being cautious, I might already have stepped out of my role as an observer of the field and taken premature and perhaps also uniformed stands in prickly questions. But, on the other hand, I cannot see how I, or anybody who seriously tries to grasp what has been going on in a discipline, could avoid doing just that. There simply is no neutral ground where an observer could dwell and assess the domain in a detached way. Already in writing about and giving a description of an epistemic field like cave-art studies, one becomes involved, to some extent at least, in the problems, struggles and positioning structuring the field under observation.[62] And from a doxological point of view, I am not sure that this is all bad, nor to be avoided – as long as one is clear about what one is doing, and what kind of claims one is putting forth. So, instead of getting into even more detailed arguments about the eventual pros and cons of shamanism, art for art's sake or totemism as explanations of what we find in the caves, I would like to take a step back and ask: What does a doxological stance imply when it comes to the general possibilities of answering the questions concerning the validity of interpretations?

In the chapter on the interpretations of cave art in *The Mind in the Cave* (2002), Lewis-Williams sums up some criteria 'by which scientists judge and compare hypothesis' and that, according to him, have to be met for a scientific theory to be acceptable.[63] I will use these criteria as a point of departure for a more doxological assessment, as they represent fairly well the aspects of the doxa of cave-art studies, and no doubt also the common doxa within most of the contemporary

human and social sciences, relating to evaluation of hypotheses, facts and interpretations.

Let me start with a brief paraphrasing of Lewis-Williams's criteria, before discussing them one by one in some detail:

Lewis-Williams's first point is that an explanation of a phenomenon must accord with received, well-supported general work as well as with overall theory.
Secondly, he continues, an hypothesis must be internally consistent; that is it must depend in all its parts on the same premises, and the parts must not contradict one another.
His third criterion is that hypotheses that cover diverse fields of evidence are more persuasive than those that pertain only to one, narrow type of evidence.
Fourthly, an hypothesis must be such that verifiable, empirical facts can be deduced from it, that is that an hypothesis must relate explicitly to observable features of data.
Fifthly, he concludes, useful hypotheses have a heuristic potential; that is, they lead on to further questions and research. [64]

Up to a certain point these criteria are both sensible and reasonable to adopt when trying to evaluate a suggested theory, hypothesis or interpretation of cave art (or any other kind of phenomena). But, from a doxological point of view, it is not necessarily evident how to understand them. For example, how are we to comprehend the implicit separation of interpretation from fact, of explanation from interpretation or, for that matter, of evidence from illusion present in Lewis-Williams's reasoning? All these distinctions seem to be unproblematic for Lewis-Williams, at least on the programmatic level, whereas they all need to be qualified before they can be accepted as doxological tools. So let me look at the criteria one by one, and try to spell out a doxological stance.

The criteria, doxologically seen

The first part of the first criterion fits rather well with the notion that in science one has to depart from, and in that sense comply with, the always already pre-existing knowledge within the discipline or the field. In the words of Ludwick Fleck: 'The existing fund of knowledge must be a third party in this relation [i.e., cognition] as a basic factor of all new knowledge.'[65] Hence, this first part is quite uncontroversial. The second

part, on the other hand – that the explanation must accord, 'with overall theory' – is more problematic. Judging from the example presented by Lewis-Williams ('one cannot explain an aberration in a planet's orbit by invoking laser beams directed at it from living beings in the vicinity of Alpha Centauri')[66] this part of the criterion is heavily dependent on a specific version of what one could call the scientific common sense of the beginning of the twenty-first century in the Anglo-Saxon epistemological tradition. That one 'cannot' invoke lasers used by beings living on Alfa Centauri is simply not true – of course one can invoke such an explanation. Most would agree with Lewis-Williams that it is a bad explanation, or even that it is plainly wrong – but this is not in itself enough to dismiss it. Just recall Michel Foucault's statement about Mendel,[67] who evidently told the truth but who was not received within 'the true' of the biological discourse of his time, to realize how shaky and misleading such evidence may be. From a doxological standpoint, the evoking of Alfa Centauri activities cannot be dismissed simply by a reference to overall theory – one has to show why, in this specific case, this specific explanation is insufficient or unacceptable in relation to the knowledge claim made. Thus, the doxological stance does not necessarily imply a change in what is conceived as an acceptable explanation of a fact, or an acceptable solution to a problem – but it does imply a change in attitude towards what seems to be evidently wrong, or simply strange. The foundation of doxic knowledge can never be (the experience of) evidence, nor (a reference to) what is given – it has to be construed, each time, within the specific epistemic field, using the specific methods, styles and practices of the field, always keeping in mind that the construction might have been different, and may become so in a near or distant future.

The second criterion (that an hypothesis must be internally consistent) is also acceptable within a doxological notion of science (I do not really see what it could mean *not* to accept this criterion) – with the important precaution that one can not treat the notion of consistency as something absolute. What is and what is not consistent depends upon, among other things, how narrowly or how widely one needs to define the terms (or, as the case may be, actions, practices and notions) in a specific epistemic situation. For a certain type of philosophy it is quite inconsistent to claim that Socrates is both immortal and man; for another type it is quite acceptable – it all depends on how one understands (or perhaps chooses to define) immortality and/or man. The understanding and the reasons for choosing are always dependent upon the doxa of the field, the thought-style of the discipline, upon

your position in the field as well as upon your reasons for defining the notion, action, habit and so forth in question – that is, dependent upon what you want to do with the definition or notion in question. Regardless of whether consistency is a well and unequivocally defined concept within certain domains of the scientific field, it always needs to be put into relation with the ever-changing doxic conditions in the specific epistemic field, and the specific situation that conditions the knowledge of that field.

The third criterion – that an 'hypothesis that covers diverse fields of evidence is more persuasive than one that pertains only to one, narrow type of evidence' – is an interestingly rhetorical one. It differs from the other two in making a claim about what is 'more persuasive' – that is, it makes a general, even universalistic, claim about the presumed effects of a certain kind of hypothesis on every kind of audience. Again, I am not disagreeing with Lewis-Williams about the content of the criterion. It may be shown both historically, and within contemporary science, that such hypotheses have been, and are, more generally accepted than hypotheses with narrow scopes. But what does this mean? The example given by Lewis-Williams is telling: 'For example, if the theory of gravity applied only to inanimate objects, such as tennis balls, and not to living creatures, such as people, its explanatory value would be so limited that scientists would reject it.'[68] The example states something that is no doubt true about a specific kind of audience (scientists), in relation to a specific explanation of why 'what goes up must come down'. The force of the example – its persuasive effect upon us, readers of Lewis-Williams – depends upon our (presumed) preconceived notions about what kind of interests scientists have: We tend (or are supposed) to think that scientists are interested in formulating general laws for everything, and that this is the reason why they would not content themselves with an explanation that concerned only 'inanimate objects'. So, the criterion that seemed to be universally valid is, in fact, only valid in relation to a certain notion of science and of scientists – which, again, makes a case for promoting the doxological notions of situatedness, dependence upon historical and disciplinary conditions as well as upon specific interests of the actors involved.[69] Plainly speaking: A narrow hypothesis may be just as persuasive as a broad one – it all depends on the situation, the field, the doxa, the actors, the history of the field and the (personal) history of the actors, the pre-existing knowledge, on who (the orator) has announced the hypothesis, on who receives it (the audience), on the actual power structure of the relationships among all these factors, and so forth.

The fourth criterion is a classical empirical one. One must be able to deduce 'verifiable, empirical facts' from an hypothesis; it must 'relate explicitly to observable features of data'. This may seem quite straightforward. The hypothesis is supposed to say something about the world that can be verified by looking at the world and seeing how it is. But from a doxological point of view there is no way the world is in and of itself. What we see is formed by ourselves, our bodily makeup, our concepts, our presuppositions and our interests, and we have no way of knowing whether or when our hypothesis corresponds to 'the world as it is'. Therefore, this criterion[70] must be understood as stating something about the requirements in force within the scientific field, discipline or doxa in question – but not anything about science or research in general. It may very well be the case that most so-called empirical sciences cherish some version of this criterion. Nevertheless, its application has to be determined and discussed specifically in each case. Thus, the doxological position does not endorse relativism in the traditional sense. We need to distinguish facts from guesses, truths from illusions, knowing from believing – but we have to make these distinctions in the full awareness that they are our own constructions, fabrications made by ourselves in order to deal with the human world that is ours. And that their validity is, and always has been, confined within our (by human measures made) version of the world. To highlight the difference between a doxological stance and relativism, let us consider what David Bloor writes, expressing a traditional relativist position:

> From a naturalistic and relativist standpoint, knowledge is a form of collective 'adaptation' to reality. The correspondence between thought and reality has evolved by trial and error. As the historical product of a complicated, causal interaction, this adaptation can never be more than provisional.[71]

Despite its many affinities with Bloor's version of relativism, doxology goes beyond relativism in, and through, not accepting any adaptation to a given pre-existing reality. Instead, doxology focuses on the manner and conditions of production (as well as reproduction) of what is considered to be real within a specific field or culture at a given time. So what a fact or a datum is, as well as the significance of 'verifiable' and 'observable', must be decided within the specific scientific domain. This domain consists of one or several thought collectives, with their respective and interdependent thought styles, and in the awareness that

each field construes its own epistemology in constant confrontation and cooperation with its surroundings.

Lewis-Williams's fifth criterion is of a slightly different kind – it tells us that useful hypotheses should have a 'heuristic potential', that is that they should be able to 'lead on to further questions and research'. In a way, this is a very doxological criterion, since what is useful and what is to be counted as 'further questions' have to be identified as such, not only in relation to the already existing bodies of knowledge, but also in relation to specific interests and desires within, and in between, disciplines, epistemic fields, scientists, cultures and so forth. In each specific case, what is and what is not a fruitful hypothesis or a further question has to be determined with hindsight as well as foresight, and with as clear as possible a notion of the constraints and possibilities contained within the doxa in vigour. The yardstick for judging whether a certain hypothesis has heuristic potential or not is always to test it within a discipline or an epistemic field and see what results it yields. Its eventual usefulness may, in happy cases, be judged completely from within the discipline or the field. More often than not, it is the result of a negotiation among scientific, personal, economic, political and institutional interests. Traces of such negotiations can be seen in the history of cave art, such as the controversy around the shamanistic hypothesis. But there are, of course, far worse and more intimidating examples in abundance.[72]

I am confident that, transformed according to the above qualifications, the five criteria for evaluating various hypotheses may serve well within a doxology. But for them to be useful, they have to be complemented by at least a fragmentary description of the doxa of the field or the discipline in question. So, before I formulate two suggestions that, hopefully, will be seen as my contribution to cave-art studies, let us highlight some of the features that I have found to be of central importance in the doxa of cave-art studies.

The doxa of cave-art studies, a compressed version

I would like to make a compressed survey of some of the topoi and some of the characteristics of the field that I have pointed out thus far. The idea is thereby to make it clearer what a doxological approach would mean in this case. In the previous section, I tried to spell out some central features of a doxological approach to hypothesis and theories. Here, I am going to focus on the components of the doxa of cave-art studies – its topoi.

In doxology, relying heavily on the classical rhetorical definition, the topoi of a field are seen as commonplaces or thought figures that structure the thinking and perception of the actors in the field, whether they are aware of it or not. The topoi are often explicitly used in debates and argumentation, and there is a general agreement within the field that they are, or represent, issues worthy of attention.[73] In the sociology of Bourdieu, one would perhaps talk of topoi as points of objective consensus, in the sense that even though they may be the matter of bitter feuds, they are still seen by all as worth fighting over, important to defend or attack. In the process of explicitly articulating some of the topoi I have touched upon above, I hope to bring out features that may help others better situated and equipped than myself, to effectuate a more complete, more detailed, study of this doxa. And I also hope to add yet another aspect to my position on cave-art studies as an example of how doxology can be used in order to understand the production of knowledge in a field.

The thought collective, the style and the topoi

The archaeologists, the researchers, the doctoral students, the teachers, the writers, the filmmakers[74] – yes, even pre-historians in general who in one way or another are engaged in questions or practices relating to cave art – form a loosely knit thought collective in the sense that Fleck gives to this term. This collective is still mostly centred around specific institutions and organizations in France[75] – such as certain museums, certain departments in the universities, certain journals and so forth.[76] What is holding the participants in this voluminous collective together – apart from participating in and socializing at the same conferences; writing in the same or interrelated journals and collective publications; working together at excavations and other relevant sites (exhibitions, museums) – is that they share a certain thought style, again in Fleck's sense. This style is, in turn, an important aspect of the doxa of the field. Fleck has, as argued above, shown that facts, theories, criticisms and discoveries all have to be presented and shaped in an in-style fashion in order to be 'seen' and/or received within the field. But it is not easy to characterize this style in a sentence or two. I hope the many quotations above, together with my remarks, have been helpful in giving at least an idea of how the researchers within the field tend to express themselves, what kind of arguments are put forward, which are not and so forth. As the discipline has, as mentioned before, formed itself on, rather than within, the borders of anthropology, ethnography and

archaeology – that is, where social science intersects with the humanities and the natural sciences – the typical style of cave-art studies is, I would say, that it has no style that is strictly its own. Taken as a whole, the domain shows a concern with writing and formulations that may be associated with practices within the humanities (the debate concerning 'art' being an example); a usage of diagrams and statistics that appears to stem from a notion of scientificity within the social sciences and, finally, a concern with the pros and cons of different methods for dating and identifying materials and so forth, connecting to certain of the natural sciences.[77] But, as far as I can see, there is no sharply distinguished style to which the researchers have to comply or be excluded from the field – which, of course, also makes room for very divergent approaches and ways of arguing within the field (the debate concerning the shamanistic interpretation could perhaps be seen as an example here). Thus, the identity of the collective seems to be more closely linked to certain topoi than to a specific style.

A central topos of the doxa of the field connecting most, if not all, other topoi of the field, seems to be the acceptance of and adherence to the history of cave-art studies. I have reproduced this history in outline above. It contains in its turn other topoi, such as Sanz de Sautuola as a misunderstood and mistreated pioneer; de Cartailhac as being stubborn and dogmatic, but also an honest scientist who was not afraid to admit his errors when finally proven wrong (this is, I would say, an essential feature of the scientific ethic upheld as an ideal within the field, an ideal that is of course but a variant of the Socratic example telling us that it is better to be refuted than to refute, which in turn is an idealization of science common to most scientific fields); of Breuil as the hard-working scholar inspired by both scientific and aesthetic concerns, oblivious to the hardships the task demanded; of Raphaël as the unseen genius, and of Laming-Emperaire and Leroi-Gourhan as the most prominent representatives of the post-war state of the field.

When speaking about acceptance of, and adherence to, this history I do not mean that everyone in the field would, on pain of exclusion, be forced to accept this history as such or as it stands. What I am trying to articulate is that the self-perception of a field and of the actors in it – including tensions, conflicts and objective consensuses – is more often than not brought out in debates, disagreements and fights about the way in which its history is, and should be, written. Hence one may conclude, for example, that the positions of Laming- Emperaire and Leroi-Gourhan probably still are central in the field, and that the institutional, scientific and popular capital of Clottes and Lewis-

Williams today is such that it is no longer possible simply to ignore their shamanistic theory – it has to be dealt with head-on.[78] That is, anyone who wants to have a say and be heard within the field probably has to take their work and position into account – if only to dispense with them. Nobody listens to a researcher who has not paid his or her dues by giving evidence of knowing enough of what is required to be in a position to speak.[79]

Two other typical features, or topoi, besides history and style, of the doxa of cave-art studies are worth mentioning. The first is the recurring assurance, reproduced in almost every text produced within the field, that we will never know for sure what the images, the traces or the signs really meant. This seems to be one of very few uncontested truths within cave-art studies – but there is quite a divergence as to what conclusions should be drawn from this. Some seem to take an essentioal lack of final meaning as an excuse for abandoning the hermeneutical quest for understanding in favour of a somewhat bureaucratic pursuit of organization, cataloguing and neutral description of the material at hand. Others take it as an invitation to follow their own 'evident' impressions and ideas about how to fill this deficiency.

The second topos is what I have referred to above as the mimetic curse – that is, the basic assumption that the 'art' found in the caves is figurative and naturalistic, depicting some kind of reality (nature, ideas, shamanistic trances, and so forth) preceding the fabrication of the 'art'.[80] I do not wish to claim that every actor in the field subscribes to this view – they do not – but it is such an entrenched thought figure that everyone has to relate to it in one way or another.[81] I will return to this topos again in connection with the discussion of cave art as technique.

Thus, the doxa of the field of cave-art studies can be seen as organized around (at least) these institutions and these four central topoi: the specific history of the field; the specific style; the impossibility of ever determining what the pictures 'really meant' and the seemingly unavoidable notion that the pictures are examples of 'realistic art'.

To see the knowledge and the knowing administered within the field as a doxa, accessible through topological analysis – and I have only given here the first fragments needed for the construction of the doxa of cave-art studies – can bring out in minute detail if one so desires or, as here, in a sort of bird's eye perspective, the manifold interconnections between the practices upheld in the field, the scientific ideals in vigour, the different actors, the institutions, the discourses, the tensions, the objects and the relations to the rest of the scientific world. It allows

for an analysis and an understanding of knowledge that construes its object as a magma of social imaginary significations.[82] Such an openness in method is paramount if doxology is to have any chance of avoiding both being caught in the struggles of the field it is trying to describe and repeating its entrenched ways of construing knowledge and knowing. So, doxology needs yet another a strategy, a technique for creation. It is time to turn directly to Cornelius Castoriadis.

7
Caves and Doxa

In finally and explicitly bringing caves and doxa together, I wish to achieve a mutual elucidation, and perhaps also a slight transformation, of the two topics of this book. I fear I have so far not really contributed in a positive way to the field of cave-art study. But I hope to do so, very modestly and only on the conceptual level, in what follows.

It is, I believe, quite uncontroversial to claim that cave art, just as any other invention made by man, has its styles and its techniques. However, to declare cave art to be a technique or a technology in its own right – comparable with, say, the technique of writing – is not as readily accepted. Why? Well, in general because of the persistent tendency to think of cave art as art in the aesthetic sense (whatever that can or could finally mean when speaking about man-made traces from a period so remote in time); and, more specifically, as a figurative and naturalistic art – its techniques then being limited to that of faithful reproduction.

In order to detangle the conceptual muddle surrounding the traces in the caves, and perhaps also to be able to shed some new 'light of the mind' on them, I would like to test two different but intimately related philosophical approaches to the material found in the caves, and see what may come out of them. Firstly, I turn to Cornelius Castoriadis, and look at what could be gained from discussing mural cave art in the general terms of his philosophy, particularly from employing on cave art his notion of technique. Secondly, I will make use of some of Ernst Cassirer's ideas concepts, also focusing on the notion of technique, to see whether mural cave art may be seen traces of a specific symbolic form. In both cases, the concepts of creation, tools and technique will be of vital importance.

Technique, technology and creation (Castoriadis)

Social imaginary significations, creation out of nothing – a brief overview

The value of Castoriadis's approach to art and technology hinges to a large extent on the notion of social imaginary significations. But to grasp this concept, it needs to be approached in relation to some of the core ideas of his anthropological philosophy – especially the notion of creation and the related notion of radical imagination. Therefore I will give a brief introduction to the rather complex ontological reasoning of Castoriadis, hoping that its relevance and importance for both doxology and cave-art studies will become evident as I go along.

For Castoriadis, creation in the strong, valued sense of the word is creation not of new stuff but of new forms, that is, of new concepts, of new ways of making sense of and organizing our human world. Distinguishing conceptual creation from what he refers to as secondary creation (or secondary imagination) – that is articulations or recombinations of what already is there to articulate – he posits that such creation is the result of the workings of our radical imagination. In *Fait et à faire* he explains his choice of terms:

> The use of the term imagination imposes itself due to the twofold connotation of the word: the connection to *image* in the most general (not only 'visual') sense of the term, that is with *form* (*Bild-, Einbildung,* etc.); and its connection to the idea of invention or, better and strictly speaking, to *creation*.
>
> I use the term radical first of all to make a contrast with what I call 'secondary' imagination, which is the kind of imagination one usually talks about, a simply reproductive and/or combinatory imagination, and, second, to emphasize the idea that this imagination comes *before* the distinction between 'real' and 'imaginary' or 'fictitious'. To put it bluntly: It is because there is radical imagination and instituting imaginary that there is any 'reality' at all for us, and reality such as it is.[1]

As if this were not enough to make most readers rather sceptical, Castoriadis paradoxically states that our radical imagination creates reality *out of nothing*. With this statement he contradicts most Western thinking since the invention of philosophy. In fact, nothing seems more evident and indisputable than the axiom *ex nihilo nihil*, 'out of nothing, nothing can come'. What could Castoriadis possibly mean

when he confidently states such an absurdity? This is how he explains himself:

> [T]here is creation in being, or, more precisely, being is creation, *vis formandi*: not creation of 'matter-energy' but creation of forms. There are always necessary but not sufficient conditions for this creation. Creation, as far as form – *eidos* – is concerned, is *ex* [from] *nihilo*, but it is not *in*[in] *nihilo*, nor *cum*[with] *nihilo*.
>
> What is the point in adopting a term with such a loaded history? On one hand, to end the subterfuges and the sophistries concerning the question of the new: either there is creation, or the history of being (and consequently of humanity too) is an interminable repetition (or an eternal return).[2]

As to understanding Castoriadis's way of reasoning in relation to the question of the very possibility of anything new being created, we find two clues in this quotation. Let me start with the last one: '[E]ither there is creation', he says, 'or the history of being (and consequently of humanity too) is an interminable repetition (or an eternal return)'. In other words: If we do not reckon with our ability to create *ex nihilo* (in the specific sense that Castoriadis gives to this notion) we would have to admit all kinds of oddities. We would, for example, have to accept that everything that now *is*, is out of necessity and, therefore, in one sense or another has been with us ever since the Big Bang (or whatever *arche*, origin or primordial act of creation you choose). Or, if we are reluctant to admit the existence of a ready-made Being in all its shades, then we would at least have to admit that everything is fully explainable in casual terms, that is traceable, at least in principle, all the way back to some origin or originator. Castoriadis calls this train of thought 'the myth of being as determined', and rejects its universalistic pretensions:

> To be sure, the idea of creation stands in opposition to the postulate of an *integral* and *exhaustive* determinism. But it does not mean, that there are no local, or sectorial, determinisms.[3]

How would one go about, he asks rhetorically, to explain the symphonies of Beethoven in casual terms? One simply has to accept that music was invented at some specific moment in history, and in this moment the symphonies became both possible and also partly explainable. This critique follows an immanent rationale that may be summarized as follows:

Since the idea of a universal causality and the total, saturating rationality of what there is seems to be at odds with the way the world actually presents itself to us, and with the way *we* are and act in the world, we have to assign to causality and rationality their proper places and ranges. That is, we have to assign them to the strata in our world that actually, inevitably and necessary are 'ruled' by what Castoriadis calls *ensidic* logic. No world is even thinkable without an ensidic dimension.

Ensidic thinking or ensidic logic is Castoriadis's shorthand expression for the kind of thinking and logic that he calls *ensembliste-identitaire* – thinking based on the idea that all aspects of being are specific differentiations of a determined original element, an element that therefore should be considered to constitute the unity, identity or essence of these aspects of being. Ensidic logic, when posited as universally valid, rejects the possibility of creation in general and, consequently, of human creation as well. Ensidic logic classically puts the origin of the laws of our world (natural laws as well as social ones) outside of *our* world and society. In this respect ensidic thinking is heteronomous, as it tends to mask ('cover over') the fact that man and society are inexorably autonomous –that man/society posit their own laws, natural as well as social. It is hardly surprising, then, that Castoriadis condemns the universalistic claims of ensidic thinking that has been dominating Western thought at least since Plato.

As soon as we have rid ourselves of these imperious and universalistic notions of causality and rationality, we realize that if there is (to be) any world at all, it has to be created in some way. And since the options God or evolution both presuppose the very notions of universal causality and/or saturating rationality that, following Castoriadis, we should try to avoid; and since the world undeniably is there, we are left with ourselves and our autonomous ability to create our own world. Hence, in order to understand ourselves and our world, we have to presuppose that we are endowed with a *radical imagination* that makes it possible for us *to create out of nothing*. We create new forms that are not completely reducible to what was there before. It is this 'not being completely reducible' that is the core of Castoriadis's notion of creation *ex nihilo* – that part, that formal aspect, that was not there before actually emerges as something radically and ontologically new, in the process of radical creation.

The second clue to understanding Castoriadis's claim is that there are always necessary but not sufficient conditions for this creation. It is important to note Castoriadis's qualifications of his notion of *creatio ex*

nihilo: it never occurs *in* nothing or *with* nothing, which suggests that it always takes place in some context or another, and that in order to occur it needs what is always already there. Hence, Castoriadis's notion of *creatio ex nihilo* certainly is very different from the theological one. In truth, Castoriadis's creation is always a creation under constraints. These constraints – they may be, and are, biological, social, historical, physical, philological, linguistic and so forth – have a double function. They limit the scope and the possibilities of creation and, at the same time, they actually give radical imagination the footing, the material, it needs to do its work.

But, if so, why insist on calling this creation a creation out of *nothing*? Castoriadis's answer is that our ability to create out of nothing is the 'capacity to make emerge [*faire émerger*] that which is not given, nor derivable, through combinations or otherwise, from what is given'.[4] Which is another way of saying that the creations of the radical imagination are always *conditioned* but never completely *caused*.

Consequently, to create *out of nothing* in the sense of Castoriadis, is to create a form *of* being, and a form *for* being, which is not simply a combination of other forms that are already there, and which is not completely reducible to whatever forms were there before. Let me try to make this a bit more concrete. I am certain that Castoriadis would not have considered the creation of the centaur as a *creatio ex nihilo,* whereas he most definitely does consider the creation of society as one. Why? Well, because the form of the centaur (i.e., the idea or notion of a centaur) seems to be completely reducible to the combination of the pre-existing forms of horse and man, whereas society as a form of social organization is not reducible in this way. Society is, in this specific sense, an irreducible concept.

Moreover, creation in Castoriadis's sense is not only, nor primarily, an individual affair (as perhaps some liberal thinkers would have it), nor is it primarily an effect of intentional acting from one or many individuals. The radical creation that Castoriadis talks about is not reducible to, nor explicable only in terms of, pre-existing intentions. It is a social, historical process, producing social imaginary significations around which the society in question can form and institute itself. He explains:

> Society is creation, and creation of itself: self-creation. It is the emergence of a new ontological form – a new *eidos*– and a new mode and level of being. It is a quasi-totality held together by the institutions (language, norms, family, tools, modes of production, etc.)

> and by the significations these institutions embody (totems, taboos, gods, God, *polis*, commodities, wealth, fatherland, etc.). Both – the institutions and the significations – represent ontological creations. We do not encounter anywhere else institutions as a mode of relation holding together the components of a totality; and we cannot 'explain' – that is causally produce or rationally deduce – either the form institution as such, or the fact of the institution or the primary institutions that are specific for each society. And nowhere else do we find signification, that is a mode of being of an effective and 'acting' ideality, of an immanent unperceivable; nor can we 'explain' the emergence of primary significations (the Hebrew God, the Greek *polis*, etc.).[5]

To sum up: For Castoriadis creation is first and foremost creation of significations, that is, of meaningfulness for and in our human world.

Castoriadis's anthropological philosophy is thus both an ontology and a social philosophy at the same time. The world is, in a concrete sense, made in and through the social and the historical. The social is, in its turn, always conditioned by the always already existing world. There is nothing transcendent according to Castoriadis's way of looking at ourselves and our societies: Everything is immanent to, and embodied in, the social, historical, biological, and so forth, processes that are the conditions for there being a world, and a world such as it is.

It is time to leave this level of general presentation. Let us now concentrate on what Castoriadis has to say on the more specific issue of technique and technology and how his thoughts connect to both the Platonic qualms and the mimetic curse that are palpably present in cave-art studies. In a major article on technique and technology from 1973, 'Technique' (republished in *Les Carrefours du Labyrinthe 1*, 1978),[6] Castoriadis plainly states, in a paragraph concerning technique as absolute invention, that

> we have to renew our way of seeing and put aside a large (and good) part of the philosophical tradition which in this case prevents us from seeing what there is. Here, what prevents us from seeing is the Platonic *eidos*, the eternal necessary paradigm for everything that could ever be, and its consequence, the *mimesis*. What the technique brings to being [*amène à être*], in decisive cases, is not an imitation or a reprise of a natural model…; it is something that in relation to nature is 'arbitrary'. The technique creates 'that which nature itself is incapable of accomplishing'.[7]

I suggest that we try to see cave art through the lens of Castoriadis – namely as a technique which creates an indissoluble grid of artefacts and social imaginary significations within one or perhaps several Palaeolithic society societies. Applied to the traces in the caves, this would mean seeing them not as the effects of previously seen things, nor of mental representations preceding the making of the traces, nor as depicting anything pre-existing. It would allow for cave art to be a technique that is not an imitation or a reprise of a natural model, but instead a mode of creating concepts, forms and significations in a specific social setting at a specific time.

Everything here depends on how we understand the concepts and the terms involved, art as well as technique and technology. Having said enough about the perils and possibilities of the usage of the term 'art' and concept of art, I will leave this problem suspended. Instead, I will attempt a tentative explanation of Castoriadis's concept of 'technique' and its eventual consequences for what we may see in the caves. However, I will abstain from venturing into the intricate and complex relations and transformations of and among art as *poiesis*, art as *mimesis*, art as *techne* or, for that matter, technique as *techne* and technique as *poeisis*. This problematic was first established and conceptualized in ancient Greece and has ever since been partaking in and forming the joint history and understanding of art and technology all through Western history – the debate within cave-art studies on how to understand the term 'art' discussed above is but one example, evoking many of the typical features of such a debate. The effects and importance of this conceptual complex cannot be underestimated in any discussion of art or technique, but it would take me too far astray (and be the topic of yet another book) to address it head-on here. Moreover, surveys of these issues may be found in almost any history of art or of technique.[8]

What is technique?

In order to situate more precisely what is at stake, let me take a statement made by Jean Louis Prat in his book *Introduction à Castoriadis,* as a point of departure. In a passage leading up to an explanation of Castoriadis's notion of creation, Prat writes that

> we have to attribute each invention to an *anonymous collective*, the instituting imaginary, that does not appear to us but through its creations, the successive forms of the instituted imaginary. ... It is in the same sense that we also talk about technical or artistic creation.[9]

Applying what Prat says to cave art is both a bit elucidative and a bit disappointing. It tells us that we have to presuppose an anonymous collective agent that has instituted these forms in the caves (which at least rules out the romantic notion of cave art as being the legacy of a few Palaeolithic individual geniuses creating 'art') and that we have no access to this collective agent but through the forms it has instituted. We seem to be back at square one again, having learned nothing new. But another perspective emerges if we pay heed to the last sentence in the quotation, which equates the *process of instituting* with 'technical or artistic creation'. Let us pick up the thread of technical creation, follow it through the text of Castoriadis, and see where it may lead.

Already, in the opening paragraph of 'Technique', the article mentioned above, Castoriadis connects his topic to prehistory. Quoting Leroi-Gourhan, he argues that 'language and tool are expressions of the same property of man', and claims that they implicate the same detachment from the immediate.[10] In both cases there is an emergence of a temporality that is *sui generis*, and in both cases we are dealing with an 'exteriorization of man', that 'tool and word immediately double their empirical existence' and, finally, that they both pre-exist and control the individuals who, in turn, control and use them.[11] In stating this, Castoriadis has already marked out the major themes of his text: that thinking and doing are interdependent; that they both partake in the creation of a human world of imaginary significations; that thinking needs some kind of embodiment to exist at all, and that thinking and doing both shape, and are shaped by, each other in a constant *va et vient* in which it is impossible to pinpoint what came first, or what is representing what. We would not be what we are without the specific thinking and doing that have formed just us, and yet they could have been different.

Passing through a critical discussion of the Greek terms *techne*, *poeisis* and *physis* and of their often paradoxical interrelations, Castoriadis finds that Greek thought, despite some promising attempts in the works of Plato and Aristotle, never really considered the possibility of human creation as a creation out of nothing (in the specific sense Castoriadis gives to this notion).[12]

Regarding how human creation is conceived, Castoriadis continues, nothing much has changed since the time of the Greeks. In present thought, technique is seen either as a 'power to produce' something in the correct manner (how to play the piano, for example – and the specific technique used while playing; the dexterity) or as the 'disposal

of a coherent ensemble of already produced means (instruments) wherein this power is incarnated'.[13] Thus, technique (for example, how to play the piano) and creation (the interpretation of a piece of music, the expression) are kept apart, the former being seen, at best, as a more or less able servant of the latter. Castoriadis writes:

> An apparent paradox: this 'vulgar' notion of technique as a neutral and serving instrument is the notion of an epoch in which the first grand idea is born, going beyond the Greek *techne* and explicitly positing technology as a both central and creating moment of the social-historical world.[14]

For Castoriadis the exploration of this 'grand idea' passes through Karl Marx, through the latter's belief that man creates himself in and through his work, and of technique as an 'unfolding of rationality'.[15] Castoriadis ultimately finds the Marxian notion wanting, since Marx does not

> really question either the objects or the means of the capitalist production, but only the appropriation of the ones by the others, the capitalist diversion of the efficiency (in itself irreproachable) of the technique for the benefit of a specific class. The technique has not only become 'neutral' but positive in all of its aspects, an operating reason; the only thing man has to do is to take control of its operations.[16]

For Castoriadis, however – and this important observation constitutes the kernel of his text – the technique of a society or a culture is never simply a neutral tool to be used by man. Quite paradoxically put, one may say that man is as much at the disposal of his technique as his technique is at the disposal of man: 'Today, we may chose between thermal, water or nuclear power generating plants, prefer one location instead of another. But there is no choice as to the totality of techniques used, ...'.[17] Saying this, Castoriadis is of course *not* implying that our technique – whether we use the word in its restrained, 'material' sense or in its larger sense (preferred by Castoriadis) that includes, for example, language and social imaginary institutions – is an unavoidable destiny that we cannot but succumb to.[18] Technique, according to Castoriadis, is 'creation in the sense of arbitrary usage both of the rational fabrication of the world *and* of its undetermined

interspaces'.[19] Hence, we cannot escape our responsibility for *how* we use our technique and for *what* it is. Castoriadis writes:

> The abyss that separates the necessities of man as a biological species from the needs of man as a historical being is hollowed out by the imaginary of man, but the hoe used is technology. However, this image is still defective, since again the technique seen as a whole is not a simple instrument, and its specificity co-determines each time, and in a decisive way, what is being hollowed out: it is not possible to define the historical need outside of its object.[20]

But what, more precisely, is this technique that Castoriadis talks about? It is, of course, technique in the ordinary sense of the word – as, for example, the ensemble of technical gadgets that facilitate our daily life, and technical proficiency, such as the dexterity of a piano player – but not *only* in this ordinary sense. He writes:

> Of all 'techniques', the most important is the social organization itself; the most powerful apparatus ever created by man is the regulated network of social relations. We must of course acknowledge that this network is the institution, and the institution is much more than and another thing than technology, but it contains indissolubly the social 'technique' – the 'rationalization' of the relations between men such as it is constituted by the society under consideration – and it is impossible without it.[21]

So, society itself is, and contains, technique. The values, the ideology (in the non-Marxist sense) and the world view of a specific society are bound up and embodied in its techniques:

> How could one separate the world-significations posited by a society, its 'orientation' and its 'values', from what this society considers to be *efficient doing* [*faire efficace*]? How could one disconnect the organization that the society imposes on the world from the nearest incarnation of this organization – that is from its instrumentation in the canonical procedures of this doing?[22]

Consequently, the question of technology is a political question in a decisive sense: it concerns the total construction and reconstruction of society. We have to recognize that our technique is not just any

technique. It is a specific technique, a capitalist technology, carrying the values and significations of capitalism – rationality, causality, efficiency, productivity and so forth.[23] Therefore, it would be a mistake to yield to this rationality as if it were ineluctable. But, at the same time, we must be aware that the problems involved are complex and manifold:

> The real difficulties in this matter [are that] it [the problem of technology] touches all aspects of social life and that whatever orientation is suggested will be worthless and without possibility to concretize itself in accordance with its aim if it does not correspond to what the society wants and can create and uphold in this domain as in all others.[24]

In this very specific sense Castoriadis is not a revolutionary thinker. He fully realizes the implications of our always already being downstream in relation to earlier and entrenched social imaginary significations, and clearly states that talking about 'neutrality and freedom of choice under these conditions has no meaning'.[25] So a politic of reconstruction has to depart from what is already there, formulate its goals and values in constant interaction with the established imaginary social significations and recreate them. Which means, in my interpretation, to implement the notion of autonomy (individual as well as social) as a core signification of and in the society in question. Only then can we perhaps avoid seeing technology as having a will of its own, subjecting us all to its technical rationality, and start to create and recreate the technique as a part of our human autonomous endeavour.

Cave art as technique

Castoriadis sustains a dialogue with André Leroi-Gourhan and his way of seeing the technology and the thinking of, and in, a society as two sides of the same coin. And the coin is, in this case, the social imaginary significations that are incarnated in the tools and artefacts of a society. Referring to Leroi-Gourhan, Castoriadis maintains that 'as a technical object, the object is nothing outside of the *technical totality* [*ensemble technique*]. And, furthermore, it is nothing outside of the corporal and mental proficiency that "conditions its usage" '.[26] Thus, the artefacts of a society or a culture (ordinary tools or paintings – in this case the difference is negligible) must be seen as integral parts of the social imaginary significations of this society. Castoriadis again:

> It is not only the case that there is a 'style' of the inventions and the artefacts characteristic of each culture (or class of cultures),

> corresponding more or less to what Leroi-Gourhan calls 'the technical group' [*la groupe technique*], but also that a concrete grip of the world is expressed in the technique as a whole.[27]

Hence, what we encounter in the caves is, if Castoriadis is right, the concrete expression of a grip of the world. Nevertheless the problem is, of course, still to determine what kind of grip we are dealing with, and what kind of totality to evoke in order to comprehend the social imaginary significations embodied in the caves: considered as technical objects they are nothing outside the *technical totality* into which they once were integrated. And here we are as clueless as ever before.

Once we come to this point, it is easy to understand the attraction of the argument from analogy, so frequently resurrected in cave-art studies: If no other ways are open for us, why not try to find analogous traces, from cultures that we know more about and that we may claim to be sufficiently like the one that we are trying to understand? We have seen that such attempts have been made, and forcefully rejected, all through the history of cave-art studies. Still, the analogous reasoning seems to have taken yet a new grip on both the scientific and the public imagination – mainly through the theories advanced by Jean Clottes and David Lewis-Williams.

Castoriadis, coming from a totally different perspective, adds to the burden of those who still try to defend the value of the analogy argument. After discussing and rejecting the possibility of distinguishing technical facts from social facts, he proclaims:

> Thus one cannot rigorously separate the 'technical facts' and the others, nor give any meaning to the idea of a linear or circular 'determinism'. ... Extremely similar 'technical ensembles' are found to correspond to cultures and histories of an unlimited variety. A few dozen of archaic cultures in the Pacific, all comprehending 'technical ensembles' of strong resemblance, show distinctive features as differentiated as those of our culture and that of fourteenth century Europe.[28]

Consequently, analogous reasoning will not get us anywhere when it comes to understanding our Palaeolithic forbears. For, as Castoriadis points out: What could it mean to talk about similar or analogous traits in two different cultures, of which one of them is almost unknown to us? What would be the measuring rod to use? What kind of evidence could we produce – apart from the very arbitrary feeling that 'this has to be so'?

Preliminary conclusions on technology

To approach the engravings and the paintings in the caves as tools and symbolic imaginary significations amounts to claiming that they once embodied specific significations, characteristic of the society (or societies) and the *technical totality* that once created them. Saying this is also, in a sense, to block the traditional hermeneutic way of approaching the traces in the caves, since we are not in a position where we can set up criteria for how to recreate the sense (understood as the individual intentions of their creators) that they once embodied. We cannot hope to complete the hermeneutical and historical task of recreating the horizon of significance of these traces – they do not belong to our tradition, in the sense cherished by, for example, the philosopher Hans Georg Gadamer, or to any tradition; they belong in a decisive way to *pre*history. We are left with very palpable traces, traces that seem to be recognizable to us, but seen from a hermeneutical perspective we have no decisive idea of how to decide, in a non-arbitrary way, about *which* imaginary significations they once embodied. We only have to look at the history of the attempts of sense-making in cave art to realize, once again, that it is not enough to trust your feelings of evidence.

But the case may not be completely lost after all. If what we find in the caves really is seen as part of a *technical totality* in the sense posited by Leroi-Gourhan and Castoriadis, and consisting indissolubly of ways of thinking, doing, fabricating, eating, painting, hunting, communicating and so forth, there is at least always the possibility that future research, findings and excavations may allow us to recreate the workings of this ancient technique. That is: detect articulations, discover patterns and pieces allowing to reconstruct, surely not in its entirety, but partly, the grip of the world of the societies in which cave painting played a part.

This is, of course, exactly what archaeologists are doing, and have been trying to do all along. The important shift involved here is a subtle, conceptual one: From the traditional definition of what it would mean to understand the cave art – that is, knowing what it meant for the people who painted it – to a new, more doxological definition of understanding: to create the knowledge that we scientists of today, taking heed of all relevant extant knowing and knowledge, can agree upon as the best way of making sense of the traces in the caves. Such a redefinition would make explicit the conditions for human understanding and knowing, and have the benefit of discarding the still-lingering misunderstanding that causes us to look for the subjective or collective intentions or feelings of the makers when trying to understand traces from the past.

Expanding this perspective a bit, archaeologist may (if they agree to follow in Castoriadis's wake) presume that the images, the symbols and the carvings once were bearers of specific social imaginary significations, that these significations were indissolubly bound up with what the Palaeolithic societies considered to be *efficient doing* and that the display of a common style (in painting, in tracing, in the choice of motifs and arrangement, etc.) is – following Fleck this time – a reason to assume a common thought style. This is something. Admittedly not much, nor is it enough to allow us to formulate a decisive hypothesis about the sense of cave art. In the next section, though, I will present one way of expanding this notion of *efficient doing* as a possible route leading to an eventual (re)creation of the senses of cave art.

To conclude – looking at cave art in terms of technique in Castoriadis's sense does not really give us any specific clues as to how it should be understood. But it gives us several more reasons to be wary when projecting sense onto the traces in the caves, and also an idea about in which directions to continue searching for an understanding: Do not look at what the traces and the picture might refer to, depict or invoke. Look at what they are, how they are made, how they are articulated. Ask not what they mean, but how they might be part of producing a grip on the world. Most importantly perhaps, Castoriadis's thoughts about technique and creation promote a focusing on the activity of the scientists themselves: What are the conditions for *scientific* creation of the sense of the cave art? In what ways do they limit and direct, and in what ways do they support, the scientific effort of making sense?

The claim that cave art may fruitfully be seen as (traces of) a technology is not much of a claim, really, since the art in the caves may be seen as many other things as well. Therefore, in a final strategic move, I turn to Ernst Cassirer and his philosophy of symbolic forms. The conceptual resources inherent in his philosophy make possible a new look at cave art as a symbolic form. The next section will explore this track – and eventually return to the notion of technique and to the concrete grip on the world.

Doxology and symbolic forms (Cassirer)

Cassirer's work in general, and especially his major achievement, *The Philosophy of Symbolic Forms*, in three volumes, presents an open philosophical anthropology that I find very appealing. It is in many ways a forerunner of Castoriadis's (even though the latter never referred to the former), and it has been a great inspiration to the formation of a

doxological stance. I would, therefore, like to prolong and deepen some of the ideas already touched upon in the last section, linking together Castoriadis's and Cassirers's different positions on the possibilities and senses of technology. I also hope that, by connecting central parts of Cassirers's thought with doxology and cave art, I can create a sort of loop, leading from the caves via Protagoras, Fleck, contemporary cognitive science, Castoriadis, Cassirer, technology and back again. The notion of symbolic forms appears to be profitable for the effectuation of such an open-ended circle. It allows for an integration of the main perspectives of this book, making doxology into an heir of this specific strand of philosophical anthropology, while at the same time respecting the specificity and characteristic of each point of view. Moreover, it allows for a new approach to cave art. But in order to show this, I need to present some of the central features of Cassirer's philosophical anthropology.

Doing with symbolic forms

As we have seen, much of the problematic concerning the images and signs in the Palaeolithic caves revolves around their meaning. But, even though we have discussed many approaches to, and different perspectives on, our human sense-making, we have not yet said anything head-on about meaning. This is where Cassirer's philosophical anthropology proves to be particularly helpful for a doxological investigation. One of the problems – if not the central problem – in his thought concerns meaning. Not directly what meaning is, nor how we are to describe the phenomena that we call meaning, but rather how meaning is possible. How do our experiences present a world to us, with colours, shapes and properties that appear as meaningful and understandable, that is possible for us to grasp?

Cassirer rejects the rationalistic hope that we may eventually find behind all signs and symbols, an unambiguous foundation for all meaning in a mimetic, unmediated and therefore true intuition of the objects of experience. In *The Logic of the Cultural Sciences* (first published in German in 1942), he calls this attitude a kind of mysticism, striving to lose itself in, and merge with, the divine essence of Reality. But such a mysticism forgets the fundamental fact that

> mind [Geist] too exists only by virtue of the fact that it constantly exteriorizes itself. It continually creates new names and images, but it fails to understand that in this creation it does not approach the divine but removes itself further and further from it. Mysticism must

> negate all the image worlds of culture, it must free itself from "name and image". It demands from us that we renounce and smash all symbols.[29]

In this sense, Plato is – when it comes to his explicit intentions, but of course not in his practice, for he did after all write his dialogues – the paradigmatic example of a rationalistic mystic, striving to gain direct, unmediated insight (*theoria*) into the world of Forms.[30]

But to negate the symbols, to negate the name and image, is to reject consciousness itself. For Cassirer consciousness exists only (and I would like to stress this to fend off all idealistic interpretations of Cassirer's position in this connection) in and through the symbols it produces or creates. Seen from this perspective, Plato's wordless and non-discursive theoretical insight and René Descartes' *lumen naturale*, as well as the undertakings of their philosophical heirs, appear as futile – but, of course, important and significant attempts to escape the very basic conditions for consciousness: that is, to always be symbolic and therefore be always ambiguous and always fallible, in short, to always be doxic.

Cassirer not only rejects the basic contentions of rationalism. He also, and in the same vein, criticizes the empirical belief that the objects of our experience would make themselves understandable, comprehendable, for us through making an imprint in our souls. He writes in *The Logic of the Cultural Sciences*:

> But even if we assume for a moment that such a miracle can take place – that the "object" can migrate in this way into "consciousness" – the main question obviously remains unsolved; for we do not know how this trace of the object that imprints itself upon the I becomes *known* as such. Its simple being-there and being-such by no means suffices as an explanation of its representative *significance*.[31]

The central and, in a sense that remains to be determined, fundamental question for Cassirer is this: How is it possible that our experiences appear to us as experiences at all? Or, more exactly: How does consciousness produce itself in and through significance, that is in and through names and images, through symbols and, thereby, becomes consciousness *of,* or experience *of*, something specific?

This question, and its eventual answer, should be of great interest for cave-art studies. It implies two things that are highly relevant for the field today: firstly, that consciousness is not something locked in the

heads of individual human beings, but something that is shared and created in and through symbols and representations of many different kinds. And, secondly, that consciousness in this sense is never a question of just being conscious. It always involves experiencing. We already saw this in the discussion of sensations and perceptions above, in connection to Gärdenfors's work. To have an experience in Cassirer's sense is more or less the same as to have a perception in Gärdenfors's sense.

An experience is, thus, always an experience of something: Of a human being, of a ball, of thirst, of a piece of music, of a steep rise, of a difficult lid on a jar, of pain – that is of something that appears to us human beings as meaningful in one way or another. And since Cassirer rejects, as explanations of the sense of experience, the non-discursive rationalistic insights as well as the empiricist and equally non-discursive mental imprints, he is left with only one alternative: that the specific content and form of experience, intertwined and inseparable as they are, is given to us embodied in different symbolic forms – languages, myths, pictures, gestures, religions, art and so forth, through which our cultures, our world views, are shaped, transmitted and entrenched in us by way of habit and training. This embodiment is effectuated, first and foremost, in and through the symbol:

> [The symbol covers] the totality of all phenomena which – in whatever form – exhibit 'sense in the senses' (*Sinnerfüllung im Sinnlichen*) and in which something 'sensuous' (*ein Sinnliches*) is *represented* as a particular embodiment of 'sense' (*Bedeutung*, meaning)[32]

Nelson Goodman has pursued this line of thought in his various attempts to explain our world-making. With reference to Cassirer, he claims that we build our worlds with and out of extant systems of symbols. Each such system presents a version of the world – but to go looking for an original or first version would be as futile as looking for *the* number between 2 and 7. In the same vein, Cassirer rejects the idea that there is anything underneath or behind the symbolic forms that could explain them, or which could be said to be their origin and law. For us human beings, the significance of our experiences seems always to already be there.

But how can this be so? How are we to understand that we understand, grasp that we grasp? This is a very Kantian question, but Cassirer's answer takes him beyond the scope of Kant's critiques. Instead of postulating a set of inert schemata, categories and forms shaping our experience from beyond experience, as it were, Cassirer tries to find the conditions for the meaningfulness of experience within experience

itself, in the way that we may investigate it. With this in view, he coins the concept *symbolic pregnance*.

Symbolic pregnance

Symbolic pregnance is introduced in the third volume of Cassirer's major work, *The Philosophy of Symbolic forms – the Phenomenology of Knowledge*, from 1929. Since this specific concept is central to understanding both the workings of our human sense-making in general and for Cassirers's philosophy of symbolic forms in particular, I will go into some detail here. Cassirer presents the concept in the following way:

> By symbolic pregnance we mean the way in which a perception as a sensory experience contains at the same time a certain non-intuitive meaning that it immediately and concretely represents. Here we are *not* dealing with *bare* perceptive data, on which some kind of apperceptive acts are later grafted, through which they are interpreted, judged, transformed. Rather, it is perception itself which by virtue of its own immanent organization, takes on a kind of mental articulation, which being ordered in itself, also belongs to a determinate order of meaning.[33] (Italics are mine)

This presentation is, perhaps, not immediately transparent or graspable, so let me try to elucidate it in my own way.

First, the term. When Cassirer chooses to use 'symbolic pregnance' to name a certain non-intuitive meaning that is immediately and concretely represented in experience, it is not a random choice. No, at this very basic level it is simply a question of perceiving something as something, for instance a curved, dotted line as a curved dotted line (to use Cassirer's own example). This curved, dotted line may be experienced, according to with which symbolic form, which context, it is associated, as expressing anger, as beautiful, as an interesting curve or even as a depiction of something (for example, of a mountain's silhouette). The point is, as Cassirer puts it, that even an object as simple as a line is 'never conceivable outside or independently of a determinate form of vision; as sensory experience it is always the vehicle of a meaning and stands as it were in the service of that meaning'.[34] Every sensory experience is always already steeped in some form; hence, it always has some kind of meaning for us – or it would not be an experience in the first place.

The example with the dotted line teaches us another thing as well – just as the line can be seen as an aesthetic object, a scientific graph, a depiction and so forth, so can every object, in principle, be incorporated

into any symbolic form. In his 1946 book, *The Myth of the State*, Cassirer explicitly writes: 'It is a common characteristic of all symbolic forms that they are applicable to any object whatsoever. There is nothing that is inaccessible or impermeable to them: the particular character of an object does not affect their activity'.[35]

Since this is an important and somewhat controversial issue, relating not only to Cassirer's philosophy but to a general doxological stance as well, I would like to make a small detour here, before I come back to my elucidation of symbolic pregnance. After quoting the same lines from Cassirer as I just did, Alister Neher, in his otherwise very convincing, interesting and suggestive article 'How Perspective could be a Symbolic Form' (2005) writes:

> This is less helpful than it appears. ... Symbolic forms do not apply to everything, to any object whatsoever. They are different modes of meaning that apprehend different objects. Consider science and myth. Myth does not address the objects of scientific inquiry, and science has nothing to say about the defining concerns of myth. Cassirer says on many occasions that science and myth have fundamentally different attitudes toward the world, which can be summed up by saying that science sees the world as an 'it' and myth as a 'thou'. ... Strictly speaking, then, they cannot be said to apply to the same 'everything'. ... It is likely that Cassirer made the statement about the universal applicability as a way of conveying the general idea of symbolic form to an audience of non philosophers.[36]

On this specific point, I disagree with Neher: I find it quite gratuitous to ignore Cassirer's own statement on the grounds that it was supposedly directed towards a non-specialist audience. Still, I do understand the drift of Neher's argument, and I agree that it would be nonsensical to say that myth and science share any objects whatsoever. In this specific sense they cannot be said to 'apply to the same everything'. But then I would claim that this is not a flaw but the main point of Cassirers's notion of symbolic forms: Each and every experience must be incorporated in one symbolic form or another and, thus, there cannot be any experience that is not always already meaningful within some symbolic form. This means, for instance, that even if the dotted line in Cassirer's example seems to be the constant to which different forms are applied, it is not the equivalent of a neutral, objective and unconceptualized Reality. Already talking about a constellation of dots as a dotted curved line is to inscribe it into a symbolic form or another. What the example

shows is actually precisely what Cassirer claims: that any object may be brought to function within any symbolic form. And one must not forget that for there to be objects at all, they must be conceived of as such, that is, appear as meaningful in an experience. There is simply is no way of leaving the immanent field of symbolic forms. Turning the same point a little, Fleck articulated his version of this idea in terms of thought collectives:

> One can never say that the same thought is true for A and false for B. If A and B belong to the same thought collective, the thought will be either true or false for both. But if they belong to different thought collectives, it will just *not* be *the same* thought.[37]

For Fleck, thoughts have no disembodied existence outside of thought collectives and styles, just as, for Cassirer, there simply is not any dotted line in and of itself. And, as mentioned above, this is also the stance of Goodman, when he talks about the futility of looking for *the* world that the different versions of the world supposedly should be versions *of*. The relevance of all this to my concerns in this book, should be apparent. We cannot talk about the pictures in the caves without always already inscribing them into one kind of symbolic form or another: art, science, myth, language, even perspective. Most of the major symbolic forms have been evoked in the study of cave art, proving its symbolic generative potentials. But one form has not been evoked in this context, at least not *as* a symbolic form: Technology. With its intimate and complex links to *ars* and *techne* as well as to the production and creation of a human world, the application of this open form to cave art will perhaps provide us with some clues as to its possible senses. A first step here is to realize that the very object 'cave art' is always and inevitably a construction, a creation within a specific doxa; a doxa that may contain different and divergent constructions of the same object, depending on within which thought style it is conceived or on which symbolic form is applied to it. In a note directly connected to the passage just quoted, Neher writes (a bit surprisingly since he seems to be backing up the position that I am advocating here):

> In fact, the idea of a common 'everything' to which all symbolic forms apply is just a useful fiction. It is, Cassirer tells us, '*no psychological datum*, but rather a *liminal notion*... What we call the 'matter' of perception is not a certain sum-total of impressions, a concrete substratum at the basis of artistic, mythical or theoretical

> representation. It is rather a *line towards which the various formal modes converge*.'[38]

When Cassirer speaks about this everything as a liminal notion he seems to be articulating the very same position as in the quote from *The Myth of the State*: That whichever symbolic form can be applied to 'any object whatsoever' does not mean that there would exist a pre-symbolic order of objects to which the symbolic forms applies. No, in the same way as with the rabbit-duck example – in which the very lines making up the figure was shown to be just another level of symbolization not Reality or Objectivity in itself – the talk of objects is just part of another symbolic form, a form that perhaps may be said to constitute the liminal form for several other symbolic forms. This role is often played by science and the scientific object (or rather by a kind of common sense notion about these objects), but not necessarily so, nor in a way that would make it possible to reduce all other symbolic forms to the form of science. So, I see no reason to disavow Cassirer's words in *The Myth of the State*.

In light of this digression I would say that the term pregnance, with its connotations to pregnancy, giving birth and so forth, is chosen deliberately to denote this unlimited possibility of the experience, of the object and of the symbol to be grafted into different symbolic forms and hence to assume different expressive or representative functions. In this sense, Cassirer's term, pregnancy, plays a role very similar to Derrida's (today) more well-known terms *iterabilité* (iterability) and *citationalité* (citationality), referring respectively to the inherent possibility of all signs to be repeated as the same and to be quoted, that is, inserted into ever new contexts. Cassirer and Derrida both agree that the structure of experience is inevitably graphematical – that is, that all experience, all perception, is always already caught in a signification process.[39] Cassirer explains:

> The symbolic process is like a single stream of life and thought which flows through consciousness, and which by this flowing movement produces the diversity and cohesion, the richness, the continuity, and constancy, of consciousness.[40]

Second, the immanent organization of perception. How are we to understand that perception by virtue of its own immanent organization takes on a kind of mental articulation? As we can gather from Cassirer's insistence upon the flowing qualities of the symbolic forms,

this organization is not fixed once and for all, nor will it ever be. It is, as it were, a procedural organization. What could this mean? Once again, we can turn to Derrida for some elucidation, but this time to his most famous concept: *différance* (with an a). According to Derrida, the precondition for all experience is that the origin (of experience) always is a double origin, that is, it is always already structured as something that stands for something else. Take, for instance, the concept of origin in the traditional sense of an immutable *archè*: A stable foundation whence everything springs forth that has no origin itself. Such an origin would, to use Derrida's vocabulary, determine the game from the outside, rule the game without being part of it. And, if the origin had been an origin in this sense, that is a closed unity, self-sufficient and immovable, it would never have been able to fulfil its role as an origin. Such an origin is but a fundamentalist dream. It has never existed, and never will. But, still, this conception of origin has, all through the history of Western thought, supplemented this dreamed-up and always already absent origin. Thus, even our classical conception of origin has this rather paradoxical double structure. It is something that stands for, supplements and represents something that was never really there. Once the origin of meaning and experience is conceptualized according to this supplementary logic it is no longer possible to conceive of the origin as a point or, as a first, unique event. Instead, if it is going to fulfil its role as origin, it must be thought of as an incessant upsurge of meaning, as an activity, a continual and unavoidable motion. It is precisely this movement, this displacement that makes possible the difference between sign and signified, symbol and symbolized, that Derrida terms *différance*.[41]

When Cassirer (in this setting at least) talks about the symbolic process, he is referring to the same unavoidable and immanent movement of experience as Derrida. Remember that consciousness according to Cassirer exists only in and through the symbols it produces, and that this process is like a single stream of life and thought producing the diversity and cohesion, the richness, the continuity and constancy of consciousness. Consequently, I believe we can safely conclude that both thinkers are in fundamental agreement about the immanent structure of experience that one of them calls graphematical and the other symbolic, and which is, for both, unavoidably representational and procedural. Or, as Neher happily sums up Cassirer's thoughts:

> We give meaning to our experience with signs, but the basic function of signification is already *in* our experience, and it is the basis

> for all signification, whether natural or conventional; both rest on symbolic pregnance, 'the imprinting of sense in the senses', which is a condition of possibility for all experience.[42]

We are now in a better position to understand the final part of the presentation of the concept of symbolic pregnancy: that the mental articulation (that is, in my interpretation, the incessant integration and interpenetration of experience and meaning in the symbol) which being ordered in itself, also belongs to a determinate order of meaning.

Here, the basic line is that perception as well as experience always starts from what is already there. Every experience, every meaningful impression and every articulation implies a new structuring, a new order – but is always a novelty that is heavily dependent on, or (in Castoriadis's terms) conditioned by, what was there before. In the same way, as Goodman points out, each version of the world builds on another always pre-existing version that it has to transform, rework and restructure to make a new one, so it is with our experience and our consciousness. The determinate order of meaning that Cassirer talks about is, if my interpretation holds firm, the various symbolic forms – the languages, the myths, the traditions, the habits and the practices – that give consciousness its shape and form in a specific society and at a specific moment in time. It is this order, these symbols, these languages and ways of being, acting and thinking, with which the procedural order of experience is always articulated, and which it transforms – creates anew through the incessant alteration and (re)production of symbolic forms. And the pregnancy of these forms is, for better and for worse, as we all know, attested to all through our human history.

According to Cassirer, symbolic pregnance is the precondition for all representation and sense-making, and rather like Castoriadis's radical imagination, is required for there to be anything at all – real or fictitious. To sum up, I would like to emphasize that there is a strong concordance between the two thinkers at this point, visible all through their respective work, which comes out quite clearly in *Language and Myth*, first published in German in 1925. Here, Cassirer approaches the questions that he would develop four years later into the problematic of symbolic pregnance. In 1925 he employs the concept of metaphor to describe the common root of both myth and language. Cassirer carefully distinguishes his use of the term from the traditional rhetorical concept that 'clearly presupposes that both the ideas and their verbal correlates are already given as definite quantities',[43] fixed in a vocabulary, waiting to be exchanged for one another in metaphorical transference. Such

transposition and substitution, Cassirer continues, 'which operates with a previously known vocabulary' – what Castoriadis would refer to as secondary imagination – 'must be clearly distinguished from that genuine "radical metaphor" which is the condition of the very formulation of mythic as well as verbal conceptions'.[44] A few lines further Cassirer specifies that the working of the radical metaphor is not only a 'transition to another category, but actually the creation of the category itself'.[45] This seems to be another way of phrasing the very same position as Castoriadis's: '[I]t is because there is radical imagination and instituting imaginary that there is any "reality" at all for us, and reality such as it is'.[46] And, of course, the reason I want to emphasize this concordance is that what goes for the philosophical anthropologies of Cassirer and Castoriadis, also goes for doxology.

Could cave art be (the traces of) a symbolic form?

I trust that this brief presentation of Cassirer's thought will be specific enough to allow us to address the possibility of cave art as a symbolic form. I believe I have given ample evidence that the traces found in the caves can be incorporated, both in principle and de facto, into any symbolic form. That is, that the traces can be (and have been) determined as to their possible sense, as to what attitude to adopt towards them, even as to what they are by the different symbolic forms into which they have been included – art, myth, science, language and so on. But what if the paintings, the engravings, the macaroni, the imprints in the caves themselves are the traces of a long-forgotten, no longer extant, different symbolic form? If so, what would that mean?

Before venturing an answer, we must look a bit more closely at what Cassirer wanted to do when he introduced symbolic form as a central concept for the understanding of our world. Neher again:

> What Cassirer attempts to do is extend the Kantian critical analysis of empirical knowledge to, as he would put it, all of the other ways human beings can have a world. In other words, he investigates the conditions of possibility for such greater cultural forms as myth, natural language, art, and, of course, contemporary science. In its most general sense, the term 'symbolic form' refers to these greater cultural forms. As organs rather than mirrors of reality, these structures are not static; unlike Kant, whose analysis of empirical knowledge assumed that Euclidean geometry, Aristotelian logic, and Newtonian mechanics were completed achievements, Cassirer builds transformation and development into his analyses of the various symbolic forms.[47]

In the discussion of symbolic pregnance above I emphasized that symbolic forms are dynamic, ever-changing ways of creating meaning in and for our world. They are the fruit of a structural reflection on the conditions of human sense-making, but a structuralism *avant la lettre* both in the temporal sense and in the more interesting sense that they are not modelled upon a linguistic notion of language. In not postulating the symbolic forms as objective static structures, Cassirer's notion is in a peculiar way more contemporary than the structuralism of his successors. Yes, I would like to think of his philosophy as being topical in more or less the same sense as doxology – especially the notion of the symbolic forms as organs creating their own objects, rather than mirroring a presumed world 'out there' seems fruitful to me. In Cassirer's own words: Each symbolic form presents us with

> an independent, architectonic principle, an ideal 'structure,' or, better – since we are here never dealing with describing purely static relationships, but rather with exposing dynamic processes – a characteristic way of 'structuring' itself.[48]

But what does such a self-structuring entail? I have already argued for the impossibility of attaining a neutral, and in the traditional sense objective, contact with a non-symbolized, non-represented reality, and I have tried to formulate some consequences of this impossibility. Cassirer articulates similar ideas in relation to his description of symbolic forms, in a way strongly reminiscent of Svenbro's interpretation of Empedocles's theory of perception:

> Each of the different kinds of 'seeing' define by themselves their own order of the 'seen', whereby the seen and the viewpoint, the perceived and the ideated, the 'present' and the 'representative' can always be shown as one in the other, in correlative connection, interwoven with one another.[49]

Accordingly, what we would need in order to convincingly describe cave art as a specific symbolic form is something like an ordering principle, which could be applied to the different elements or 'symbols' we find in the caves. And this is exactly what we are lacking, and what the many attempts at deciphering cave art have tried in vain to provide. Seen as a signifying system, we have (probably) all the elements we need, but we have no rules of combination, nor a semantic for what we find in the caves.[50] But what we *do* have is yet another clue to how the material from the caves could be organized and arranged in order to start making new sense out of it.

The clue is the fact (some aspects of which I have already discussed above under the heading 'The uncanny modernity of cave art') that the pictures, the engravings, yes even the signs, seem to rather effortlessly integrate themselves in the Western symbolic form of depiction and perspective. Many researchers have taken this almost as conclusive evidence for the art-ness (in the aesthetic sense, that is) of everything found in the caves. For instance, the philosopher Jean-Paul Jouary argues that we should

> stop considering this art as a simple form given to other things (to concepts, to beliefs, to shamanistic practices), and clearly recognize in it a new specific form, a form that itself is essential and generates other inventions. It is *as art* that the art of the Upper Palaeolithic should be investigated…. And the question is less to 'understand' this art than to understand why and how our ancestors could bring it into being [*ont pu le faire naître*], develop it, conserve it – why they had this vital need of materialising their representations…in this specific form.[51]

What is promising in Jouary's approach is not his evoking of art as the symbolic form to be applied to the findings in the caves, but the ideas that we should look at the Palaeolithic art as a form in itself. Moreover, it should be seen as a generative form and the main question concerning it is not: What does it represent? But, rather: Why this specific form? Why this specific style?

Combined with Castoriadis's 'technical' approach, Jouary opens new ways of exploring what we know about the caves and the cave art. Instead of asking the mimetic, Platonic question about the images as images *of*, he wants us to focus on the formal questions of the art, without therefore presuming (as in the structuralist attempts) a conceptual dichotomy as an organising principle. He connects art with the practices surrounding its conception, without reducing it to a simple expression of these practices. Thus, he allows for the dynamic, ever changing character of every symbolic form to play an essential role. Even when painted or engraved, the meaning of the art is not stable, but a function of its own properties and the ways in which it is apprehended. Jouary writes:

> The Palaeolithic artist does not paint what he sees, nor what he believes: he *gives up for seeing* [*donne à voir*] what is subsequently seen and believed, and what was previously only a diffuse presentiment. This is why it is time to break with the already archaic confusions

> concerning Palaeolithic art: the works do not reflect either 'messages' or 'perceptions' of their authors; they do not pre-exist either in their thoughts or in their sensory organs; they *produce* their authors and, in the end, what the humans will see, think, believe, feel. The work does not 'translate' emotion: it *is* emotion printed in matter.[52]

The most compelling part in Jouary's reasoning is both the focus on cognition as embodied and as something that goes on outside the individual's skull. It makes a case for conceiving of our thinking abilities, not as being confined to our brains, but rather as being connected with and incarnated in the tools we use when shaping our world. A way to take this even further would be to claim that the recurrent topic in cave-art studies, 'We will never know what it meant!', is seriously questioned by this way of approaching the sense-making abilities of the Palaeolithic men. If we no longer attribute the sense-giving solely to the individual minds and intentions of the makers of the art, then there will no longer be a principal impossibility preventing us from understanding the art.[53] Seen from this perspective, which is also the perspective of Castoriadis and Cassirer, the images and engravings, the signs and the imprints, are extant possibilities for sense-production. If we, paying heed to the scientific restrictions that I have been discussing all through this text, can create or recreate the architectonic principle that makes cave art work, then it would in principle be possible to understand it in its own right.[54]

This way of reasoning is in many ways consonant with recent findings in cognitive science, as presented for example in the work of the cognitive archaeologist Lambros Malafouris. He argues convincingly for what he calls the extended mind theory, that is, that cognition has its footing and origin in the material and in dealing with the material world. It is, according to Malafouris a mistake, and a very common mistake at that, to think of symbolic representations as being first in the brain and then in the world. This mistake is an integral part of the mimetic curse of cave art, neglecting the sense and importance of materiality. Malafouris writes:

> The hypothesis of extended mind raises the following possibility: that the intelligent use of material culture precedes intelligent thinking, or more precisely for our purposes in this paper, that symbolic usage of material culture precedes symbolic thinking. Put it in simple terms, the tool is often smarter than the toolmaker and can be shown in time to possess a mind of its own.[55]

With all this in mind, I think it is safe to say that cave art may be a symbolic form – or at least that it may be (re)constructed as such a form today. We might never find the Rosetta stone of cave art, but this need not hinder us from creating doxologically testable hypotheses about its sense and meaning. A combination of hints provided by Jouary and Malafouris, of the conceptual resources of Cassirer's symbolic forms and of Castoriadis's philosophy of creation and technique should pave the way for a possible new form of understanding cave art – an understanding that perhaps will be able to leave all Platonic qualms and mimetic desires behind. Or as Malafouris would have it: 'It is embodied and therefore needs, instead, to be discovered in action'.[56]

Cave ending – yet another take on tools and technology.

So, we have reached one of the labyrinth's dead ends, which Castoriadis talks about. Our investigation of cave-art studies has brought us into 'galleries that exist only because they are relentlessly excavated by us' and we have begun 'to move around in circles at the end of a dead-end gallery where the entrance has closed behind us'. But we have also seen some hints as to how 'this circular movement' may 'inexplicably open cracks in the walls that we can use'. [57]

For instance, to tackle mural cave art from the perspective of a philosophy of symbolic forms is to circumvent the urge for an origin, replacing it with an immanent, productive and constructivist stance – without abandoning the demands of scientific rigour. Focusing on its materiality and inherent sense-making potential seems to be the very crack through which we might press on.

But to see cave art just as yet another possible symbolic form is still too-general an approach. It provides us with a necessary, immanent and procedural conceptual framework. It teaches us that everything, from words to things, from actions to works, that makes sense to us humans is always already meaningful within one symbolic form or another. It tells us that the identity, as well as the sense of the object or the actions, is thus provided by the ever-shifting, but still specific, place that it occupies within the symbolic form – or the symbolic forms in plural, since each 'symbol' can always in principle be 'grafted' into any symbolic form and, hence, simultaneously or successively, embody different meanings. Adopting this stance takes us far beyond most traditional approaches to cave art, and into a undeniably contemporary scientific landscape. But it does not tell us much about exactly how, or in what direction, we ought to move in our attempt to press further on.

In the following, concluding sections I would like to produce an argument for seeing mural cave art as a tool in Cassirer's sense. This argument will be divided into two phases. First, I will present and, to some extent, discuss what I take to be the most relevant aspects of Cassirer's view on technology in relation to the problems evoked by, and in the study of, mural cave art. In a second move, I will present a condensed version of a concrete experiment conducted by French cave-art specialist Michel Lorblanchet in the Pech Merle cave in the department of Lot. Finally, I will contend that what goes for cave art goes for all tools, conceptual as well as technological, claiming that what we may learn in the caves resonates in contemporary sense-making.

In the second volume of his *Philosophy of Symbolic Forms*, devoted to mythical thought, Cassirer writes a few pages on technique, tools and technology. In a seminal passage, predating by five years his long article 'Form and Technology', he writes:

> Thus we see that even if we regard the implement purely in its technical aspect as the fundamental means of building material culture, this achievement, if it is to be truly understood and evaluated in its profoundest meaning, may not be considered in isolation. To its mechanical function there corresponds here again a purely mental function, which not only develops from the former, but conditions it from the very first and is indissolubly correlated with it. Never does the implement serve simply for the mastery of an outside world which can be regarded as finished, simply given 'matter'; rather, it is through the use of the implement that the image, the mental, ideal form of this outside world, is created for man.[58]

Cassirer thus connects life and thought as embodied in man's tools, seeing these tools as productive of man's world, simultaneously in both a material and a mental way.[59] And he chooses, approvingly quoting Ernst Kapp and his *Grundlinien einer Philosophie der Technik* of 1880, the term 'organ projection' as an adequate description of this process, indicating the possibility of a two-way movement – from organ, primarily hand, to 'hammer, hatchet, axe, knife, chisel, drill, saw, and tongs' but also (and this is crucial) from tools and technology to the human being, that is 'by reversal of the process as a means of explaining and understanding the human organism'.[60] In this passage, Cassirer is only talking about tools in an ordinary sense (hammer, knife, chisel), but the term 'organ projection' seems to link to all the traces (not least the positive and negative hands) we find in the Palaeolithic caves.

Seeing Palaeolithic mural cave art as a multiple tool, as an organ 'less of mastery than of signification'[61] (as Cassirer himself put it, talking about symbolic forms in general), thus seems to be a potentially fruitful approach, not yet fully explored within the confines of the discipline of cave-art study.

Turning to Cassirer's more developed arguments in 'Form and Technology', there is further support for this view, most significantly perhaps in the way that Cassirer develops the notion of codetermination between life and thought.[62] He writes, for instance, about the intermingling and confrontation (*Auseinandersetzung*) of technology and all other 'areas and entities'[63] of human life:

> Thus, every introduction of a new element not only widens the scope of the mental horizon in which this confrontation takes place, but it alters the very mode of seeing. This formative process does not only expand outwardly – it itself undergoes an intensification and heightening, so that a simultaneous qualitative transformation occurs, a specific metamorphosis.[64]

Through his consequent insistence on the principle of becoming, of creating and of transformation, Cassirer opens the possibility of seeing the traces in the caves as tools that, if we just could learn to use them, would let us recreate if not a whole mental universe, then at least some of the gestures and fragments of the practices that these traces once were living parts of. Here, Cassirer's own focus coincides with the doxological intentions of this book. He writes:

> If, instead of beginning from the existence of technological objects, we were to begin from technological efficacy and shift our gaze from the mere product to the mode and type of production and to the lawfulness revealed in it, then technology would lose the narrow, limited and fragmentary character that otherwise seems adhere to it. Technology adapts itself – not directly in its end result but with a view to its task and problematic – into a comprehensive circle of inquiry within which its specific import and particular mental tendency can be determined.[65]

In the case of cave art it is, of course, no longer feasible to focus directly upon the practices of producing mural paintings. But Cassirer opens another possibility when he talks about the mode, the type of production and the lawfulness that is revealed in the work: To move from how

it was done to what it may mean. As we will see below in the discussion of Michel Lorblanchet and his experiment in the Pech Merle cave, this possibility has been partly explored within cave-art studies – and with very interesting results. It seems as if Cassirer was right in not upholding the borders between technology and language or between tools and artworks. In fact, he claims that 'it is not the human being who, as a mere natural being, a physical-organic being, becomes the creator of art; rather it is art that proves to be the creator of humanity'.[66] Reading this, it is hard not to see Jouary's comments (quoted above) as echoes of Cassirer's.

In this specific sense, then, cave art may definitely be seen as a tool. And if this is the case it should not be impossible to move from the cave art to the 'organ' that projected it – 'organ' here being understood as the symbolic form that once were instrumental in the production of the object in question – as when Cassirer claims that all effective technological activity 'likewise always exhibits a self-revelation, and, through this, a means of self-knowledge'.[67] In the case of cave art, it is up to us, researchers of today, to find the means and the knowledge necessary for using this revelation in making scientifically tenable sense of the traces in the caves.[68]

On the remaking of the horses in Pech Merle

Cave-art specialist Michel de Lorblanchet has focused on the practical, material and physical aspects of the art of the Upper Palaeolithic era – such as, for instance: What colours were used? Which tools? Which techniques were instrumental in producing what effect? How does the environment in the cave interact with the paintings? He has clearly proven the value of embodied experimentation in cave-art studies.

His well documented life-size remake of the panel of horses in Pech Merle is significant in many ways – not least for the role it has played in refuting some of the central tenets of the shamanist theory, such as the presumed universal identity of trance-experience allegedly caused by the way the human nervous system works; the presumed importance of the very act of painting; and the toxicity of the dyes used, supposedly inducing hallucinations and trance states in the painters.[69] Important as this may be, from our point of view what is central in this experimentation is what we may learn about the why and wherefore of the horses by learning how they were made in the first place. Is it possible to gain any insight as to their signification from a remaking such as the one by Lorblanchet? In a moment, we will look at his own conclusions. But first, a very brief description of what he did.[70]

Illustration 7.1 The Panel of the Horses, Pech Merle, France

Lorblanchet started by making a copy (a *relevé*) of the original panel, by both tracing and using infrared photography. Then he found a suitable surface on which to execute the copy in a non-painted cave, near the original one. Then he reproduced the pigments: the black was made out of charcoal from oak and juniper, chewed and mixed with saliva, using water as dilution;[71] the red was ochre found near the cave. Based on the information obtained, he was able to establish that the panel was constructed in four major phases, starting with the horses and ending with the pike and the other motifs in red. (This order was later revised by Lorblanchet himself, making the pike the first phase out of five.[72]) Analysing the phases one by one, he was able to identify and reproduce the different techniques used, such as spitting the colour directly onto the surface (*crachis*), using a hollow bone for blowing the colour onto the surface (*flocage*), and also how to use his hands as templates. To obtain an acceptable result for the black points, he used a piece of leather with a round hole in the middle, thus protecting the surface from surplus pigments produced by the spitting procedure.[73]

The results obtained in the process were quite astonishing: Lorblanchet could confirm that the techniques he used (*crachis* and *flocage*), techniques he initially learned from Aboriginals in Australia,

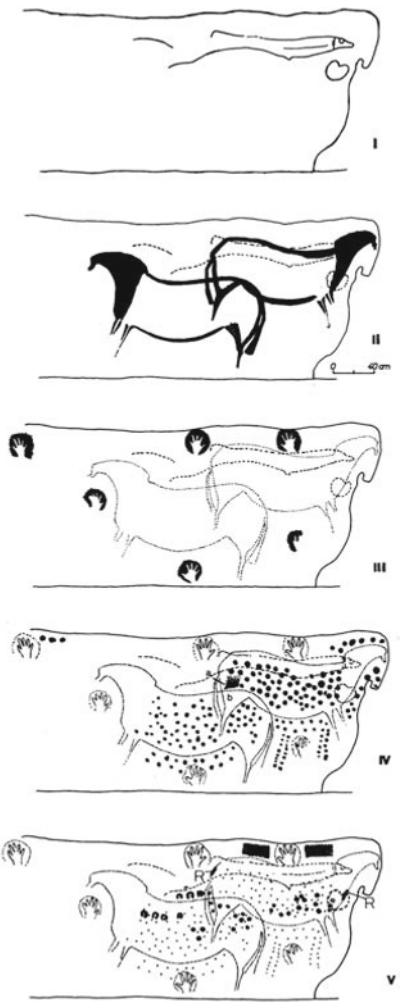

Illustration 7.2 The phases of construction of the Panel of the Horses

must have been those used when making the original horses; he estimated the total time for making the panel as 32 hours, much longer than it would have taken using other techniques, such as brushing, or using stamping techniques. He could also conclude that the horses must have been sketched in outline before being painted – during the procedure of *crachis* the mouth has to be very close to the surface, making it impossible to maintain an overall view while working – adding to the

argument that painting in the caves was a meticulously planned and structured activity and hardly something that could – at least when it comes to the more elaborated paintings or engravings – be executed in trance, or while having hallucinations, or just as a momentary impulse.[74] Thus, guidelines are necessary so as not to lose touch with the general composition and start making mistakes. Moreover, he could prove that there had to be at least two people continuously involved in the execution of the panel – one painting, the other providing illumination by holding grease-lamps close enough to the surface. He was also able to show that the entire panel was most likely executed at same time and by the same artist – and that it has been renewed at different intervals long after its completion, a circumstance that indicates a lasting interest in the panel.

Commenting upon the method of experimentation, Lorblanchet writes:

> The principal aim of making these kinds of mural experiments is to find the intention behind the gesture, the 'driving force' behind the act or, rather, to better understand the mind, and sometimes the symbolic context, within which the works were accomplished. The choice of cavern, of stony support and of pigments; the time of execution; the composition of the panel; the working conditions for the artist (accompanied or solitary); the will to exhibit or to hide the work; the usage of the extant shapes of the cave wall; the verification of aesthetic mastery etc. make up the field of experimentation. This information is indispensable and itself partakes in the interpretation of Palaeolithic art.[75]

Lorblanchet does not make the mistake of advancing a general hypothesis about the sense of the cave art – probably wisely warned by his familiarity with all previous, and vain, attempts. And even though he explicitly speaks of finding the intention behind the gesture as the goal of experimentation, I think he would not mind restating his goal as finding the intention *in* the gesture – at least, that is the way I understand his general drift here. Experimentation can only provide probabilities, not proofs, he says. It can 'underpin an hypothesis by showing not the reality of the anticipated facts, but their feasibility (*faisabilité*)' And he claims (in complete accord with Cassirer, though perhaps not aware of it) that the technique in itself is 'loaded with meaning: there is not, of course not, any gulf separating technological research from research after meaning'.[76]

To conclude, in what ways may Cassirer's and Castoriadis's thoughts and concepts help us in our effort to make sense of Palaeolithic art? In trying to answer this question, we have to be at once wary, curious and creative.

Wary, so to avoid the pitfalls common to all attempts at explications of the sense Palaeolithic art – after all, we are dealing with art that was produced for a period of more than 20,000 years, during which there were severe glaciations as well as more benign conditions. What are our claims for talking about a single type of art during this immense span of time? What would it imply when it comes to the stability of society and culture, for instance? It is a fact that we tend to create the art of the Upper Palaeolithic as a unity through inscribing it in, as it were, the symbolic form art, with all its aesthetic and formal concerns – and such an inscription is perhaps an explainable move, given the cultural context of the discovery of cave art, but it is hardly a necessary one. In any case, it does not offer us any support for claiming that man has an innate desire or capacity for beauty, or urge for making art – as so many have claimed, also in recent years, when trying to fathom the traces on the cave walls.

Minding at least these pitfalls, and in spite of previous failures, we must still be curious, and creative enough, to try to circumvent the problems and find a way out of the dead end announced by the recurring mantra 'We will never know'. As a first step, I would say that whether we will ever come to know anything about the meaning of the cave art depends entirely upon what, in this context, we mean by *knowing*. We will no doubt never be able to enter into the minds of the painters and pinpoint their intentions. But, then again – this does not, in principle, make understanding cave art any different from trying to understand other kinds of symbolic expression, from any period whatsoever. The difference, and this is of course an important difference, lies in the absence of a scientifically acceptable and sufficiently precise context (that is a context that, by and large, is accepted as relevant by those who are working in the epistemic fields of archaeology, anthropology, ethnology, etc.) that we may use as a framework when trying to interpret works of Palaeolithic art. Despite the vast knowledge that we actually possess about our prehistory, such a context is still desperately lacking.

So, the context has to be created. And I would suggest, as I have said repeatedly, that the philosophies of Cassirer and Castoriadis may be instrumental in this work. Cassirer's notions and understanding of symbolic forms, tools and technology will not give access to the sense

of the paintings in the caves, but they may well direct our sense-making efforts in a new way, and perhaps also provide the beginnings of a context for the paintings. And Castoriadis's notions of creation and social imaginary significations will support, deepen and reinforce such an approach.

More concretely, this would at least mean rejecting the mimetic/figurative/realistic curse in cave-art studies by trying to move back, as Cassirer would have it, from the mere product to the mode and type of production and to the lawfulness that is revealed in it – that is, to use experimentation, doing and the extant conceptual resources provided by philosophy and cognitive science in order to try to reconstruct the symbolic form and the social imaginary significations that are embodied in the paintings in the caves. Such an approach would not be entirely new – as we have seen, the first attempts of making sense of cave art consisted of trying to make it comply with totemism, sympathetic magic and mythological thinking as well as, from the late 1950s onward, with an enlarged structuralist conception of language. But all these approaches started in the wrong end, so to speak. They all assumed that cave art would fit into some or another of the extant forms of human culture. Cassirer invites us to do exactly the opposite: Start with the work, or works, and see what they reveal in and through themselves; do not presuppose anything specific about them from the start – no matter how you try, you will anyway inevitably bring along enough culturally dependent presuppositions, functioning as the inescapable conditions for your own sense-making. The remaking of the panel of the horses in Pech Merle may serve as one example of how such a work may be started; there are no doubt several other good ways of proceeding as well. For instance, focusing even more than Lorblanchet did on the very gestures involved in painting, using the concept of 'organ projection' as a tool for moving from gesture to subjective bodily experience, may teach us surprising things about the limits of feasibility and understandability. If a gesture involved in the making of a painting seems physically awkward or strange, this may indicate, for example, that there is something more to the picture than meets the eye.

Cassirer's and Castoriadis's philosophies also invite us to see the paintings in the caves, not as ready-made reality, but as traces of a world in the making. And such a shift in perspective is no doubt decisive for our sense-making. We are no longer forced to look for a forever-forgotten meaning hidden deep within or behind the symbols; instead, we are offered the possibility of putting the traces we meet into play, and see what they may start generating. This approach is not entirely

new, either. Researchers such as, most famously, Laming-Emperaire and Leroi-Gourhan have attempted similar approaches, trying to make the caves reveal their syntax and semantics through activating a grid of binary oppositions into which they tried to fit the paintings, symbols and traces.[77] But they did not really pay heed to the embodied aspects of sense and meaning highlighted by Cassirer and Gärdenfors, and thus mistook as failure the impossibility of integrating all traces into one grid. The notion of embodied meaning forces us to adopt a more specific, physically as well as culturally situated, way of dealing with the caves and the paintings – what goes for the horses in Pech Merle is not necessarily valid for the panel of lions in the Chauvet cave. Each work has to be seen in its specificity, as a tool designed to do something specific in just this location, otherwise we no doubt will miss important details and hints. But the work would not be a tool if it was not also a part of a symbolic form or technical totality, involving practices and beliefs, techniques and intentions.

8
Outside – Again

I hope that I have managed to show some of the topicality of both Castoriadis and Cassirer in relation to cave art. Their philosophies of technique, creation and symbolic forms are consonant with many important modes of contemporary thought. From the current interest in immanence and stratification to the latest advancements in cognitive science, passing through political science and political philosophy, the notions of embodiment and becoming are central today and in need of clarification and development. Both notions can be found in their works, once we start to read them as contemporary and, perhaps, as doxological thinkers. And to end this cavernous text – the case of cave art studies may, I hope, serve as an example of how we may proceed in creating, in the guise of recreation, a symbolic form consonant with the specific epistemic needs of our current scientific and political situation, wherein bodies have come to matter more and more, in every kind of sense. Perhaps this will create a spin, making the cracks in the walls wider; opening into yet unexplored galleries of our human cave.

Notes

1 Outside

1. I am not entirely convinced that this is true, and I will present my arguments in due course. See especially the section 'Cave and Doxa'.
2. This was the case until the very recent re-dating of, among other caves, El Castillo in Northern Spain. According to an article in Science, June 14 2012, presenting results presented by 'dating expert Alistair Pike of the University of Bristol in the UK and archaeologist Paul Pettitt of the University of Sheffield in the UK, together with colleagues in Spain', the oldest known cave art is no longer found in Chauvet cave. The article states: 'The results, if correct, include the earliest ever reported date for cave art: A red disk from El Castillo Cave, on the Pas River in northern Spain, clocked in at a minimum of 40,800 years'. However, it is still a fact that the oldest of the known painted caves from the Upper Palaeolithic era are found in what is now southern France and northern Spain. Rock and cave art is found elsewhere in the world. Very old paintings and artefacts have been found, for example, in Australia and in South Africa's Drakensberg mountains. See Anati (2003) and Bahn (1998). However, for reasons that have to do with the development of the discipline of cave-art studies, in this book I will restrict myself to the examples of Palaeolithic cave art in France and Spain.
3. My usage of the terms 'science' and 'scientific' in this book may perhaps seem a bit odd when appearing within an Anglo-Saxon tradition and context. I use the terms in a very inclusive way, as generic descriptions of all kinds of academic research into different aspects of ourselves and our world, most of the time deliberately (and in accordance with the general doxological drift of this book) avoiding the conventional distinctions between 'hard' natural science and other kinds of science (social science, humanities, artistic research). For me, as I hope to show below, all science is doxical – but in different ways, of course, and according to different epistemic demands and regimes, conditions and limitations.
4. The usage of the term 'art' in connection to what is found in the Palaeolithic caves is, of course, not unproblematic – and its usage has been much discussed within the field of cave-art studies. Even so, I will follow what I see as the 'common parlance' and keep talking about the engravings, paintings, traces, etc., that we find in the caves as 'cave art'. I will reserve my reservations to the section below in which I address this conceptual and terminological problem in some detail. See the section 'Cave 'art'?'
5. In Swedish, see Rosengren (2002; 2006); in English (2004) and in French (2011).
6. *Encyclopædia Britannica* (2007): 'Doxology – an expression of praise to God. In Christian worship there are three common doxologies: The greater doxology, or Gloria in Excelsis, ... the lesser doxology, or Gloria Patri [and] metrical doxologies, usually variations upon the Gloria Patri.'

7. Castoriadis (1978: 6) All translations from French and Swedish are my own, unless stated otherwise.
8. Haraway (1991: 187).
9. As we always have many names for the things we love (or hate), this process of creation has been known under various denominations during the last years, the most widespread of which are 'production' or 'construction' (of facts, truths, etc.) or even 'social construction' or 'social constructivism'. I will, however, and for reasons that will eventually become clear, side with Cornelius Castoriadis and choose to talk about 'creation' in these settings.
10. Bloor (2007: 252). If, after all, it turns out that my hopes for doxology are too high in this connection, I will gladly side with the version of relativism that Bloor presents in this paper – most of his arguments are, I think, in consonance with my doxological stance.
11. See 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective' in Haraway (1991).

2 Cave Opening

1. Plato, *The Republic*, Book VII, 514.
2. This is, in a very small nutshell, an outline of Castoriadis's quarrel with the heteronomous way of thinking that has been dominant in Western thinking ever since Plato, and the reason why he insists on the possibility of genuine human creation. I will come back to this complex of problems and to Castoriadis's notion of creation – see section 'Caves and Doxa'.
3. This topos and its mimetic curse has been dominant in cave-art studies, and still is to a large extent. See, for instance, the article that first made me see the predominance of both naturalism and mimetism in cave-art studies, 'Le triomphe du naturalisme dans l'art paléolithique', by Michel de Lorblanchet (1992). In recent years, scholars such as Lambros Malafouris (2007) and Margret W. Conkey (2009), working with notions like embodiment, material culture and an expanded notion of tools, have begun to seriously criticize different parts of both the topos and the curse. Towards the end of the text I will return to their recent research and how it may help us in neutralizing the effects of what Malafouris refers to as 'the representational dogma'.
4. Schefer (1999: 30).
5. Schefer (1999: 24).
6. I am, among many other forerunners and texts, thinking of Aristotle's *Poetics*, *Peri Hermeneia* and *Technē Rhetorichē*, Plato's *Phaedrus*, St Augustin's *De Doctrina Christiana*, Spinoza's way of reading the Bible, the hermeneutic of Schleiermacher, of Dilthey, of Gadamer and of the whole hermeneutic tradition – as well as of John Austin's speech-act theory, of the historical use to which Quentin Skinner has put it, and of the postmodern critiques of all of these thinkers and texts.
7. See section Doxa II, for a presentation and discussion of Fleck's main ideas.
8. For all this, see Jacques Derrida (1972), the essay 'Signature, évenément, context'.

9. With Ferdinand Saussure's terms one might perhaps say that the constitutive semantic relations are not found in *la langue* (*la langue* is but an heuristic abstraction, a tool for the linguist) but only in *la parole*, wherein the notion of *la langue* may have practical normative effects.
10. Perhaps one could even say that the measure of man, before even the possibility of any intention to measure anything, is *différance* (Derrida). Or, as I will argue, *différance* combined with *radical imagination* (Castoriadis) and *symbolic pregnance* (Cassirer), all three terms highlighting different aspects of what I think of as one and the same process.
11. For an explanation of the terms 'thought collective' and 'thought style', see section Doxa II.
12. When I claim that this effort is inevitable, I am pointing in two directions at once. First, toward Ernst Cassirer and his notion of symbolic forms as the realization of consciousness, that 'mind too exists only by virtue of the fact that it constantly exteriorizes itself' in different symbolic forms; that is, that there is no consciousness without sense having always already been made. The other direction in which I point is to cognitive science, to our body and our bodily organs, measuring our world long before we become aware of it, making segments of the world perceptible to us, and therefore also significant. See Gärdenfors (2003) and Terence Deacon (1997).
13. The basis for my thoughts on texts and contexts, as well as this very example, are collected from Nelson Goodman and Catherine Z. Elgin, *Reconceptions in Philosophy and other Arts and Sciences*. London: Routledge (1988: 49–65).
14. There are, of course, many different and perhaps not always harmonizing ways to define what a text is. Most of these ways would probably stress the difference between word and text, and say that a text is made up of words that 'hang together' in specific ways, and that consequently a word cannot be a text. In many contexts, such an objection is of course both relevant and wise – but in this setting I choose to follow Nelson Goodman's definition that *a text is always an inscription in a language*. In other settings, it goes without saying, other definitions may be more suitable.
15. As far as I know, the graphemes *turnabout*, *fondé* and *öppna*, do not function in any other languages as texts (in Goodman's sense that I am working with here), but I may of course be mistaken. Still, even if this would be the case, it would not damage my argument, since I am not advocating absolute and impenetrable borders between languages, but rather differences between 'languages in use'. Whether or not a word belongs to a language – say Swedish – is a matter of how people tend to speak and write Swedish, and not to be decided *in abstracto*. In Fleck's vocabulary, what a language is and is not is a question relating to thought collective and thought style, and of course to the dominant doxa in the group concerning the relevant question. To take one concrete example: Is 'approach' a Swedish word or an English word? My answer would be that it is, in itself, neither – but, like 'chat', as a graphem/phonem it may function in Swedish as well as in English, and once in context it assumes different properties. But this has not always been the case: Some ten years ago, 'approach' definitely did not function as a Swedish word, but rather as an English one used in a Swedish context. And 20 years ago, I do not think it was ever used in predominantly Swedish discourse.

16. Ludwig Wittgenstein famously used the duck-rabbit in his discussion of 'seeing-as' in his *Philosophical Investigation* (1953).
17. This is a very simplified and reductive description of the process of perceiving, but I hope that it is sufficient for my current purposes. For a full-fledged account, see Peter Gärdenfors (2003: chapter 2).
18. See section 'The relevance of antique perceptual theory'.
19. I will return to this discussion, in connection with contemporary cognitive science and neurobiology. See end of chapter 5 and 7.
20. Goodman (1976: 4).
21. Goodman (1976: 8).
22. Goodman (1976: 11).
23. Goodman (1976: 14).
24. Goodman (1976: 33).
25. Goodman (1976: 37).

3 Doxa

1. Schiappa (1991: 118) This is, according to Schiappa, the standard translation into English of the Protagorean dictum known as the *human measure*–fragment.
2. Plato, *Theaetetus*, 152 [I translate this brief passage from the Swedish translation, which is my preferred translation.]
3. Schiappa (1991: 131, n.4).
4. Eugène Dupréel, from whom I have borrowed this expression, calls this interpretation 'l'interprétation génerique' and says that if it is correct Protagoras 'serait le premier qui aurait en quelque sorte transposé l'idée de *nature* en l'ôtant à l'objet pour la retrouver dans le sujet connaissant.' (1948: 16).
5. For an interpretation and discussion of the concept of audience in Perelman's philosophy, see Rosengren (1998: 2004).
6. For some canonical examples of interpretations of *the human measure*–fragment, see Schiappa (1991), Poulakos (1995), Kerferd (1981), Untersteiner (1949–1962), Dupréel (1948).
7. My stance here is *not* that the wine may perhaps be bittersweet, and that Plato is wrong in claiming either total sweetness or total bitterness for the wine. Given a certain interpretation, Plato's argument is irrefutable. No, it is this very interpretation that seems to 'go without saying' that I am trying to challenge by making it more conspicuous and less a given.
8. Farrar (1988: 49).
9. Schiappa (1991: 121).
10. The term *logos* being taken in the extended sense presented in the previous section, NB.
11. There are of course also bodily conditions and restrictions forming our world view, but they cannot be as neatly disconnected from our *logos* as one generally has had a tendency to think in mainstream Western philosophy.
12. Bourdieu is not, by far, the only contemporary scholar to think in this *doxic* way. See, for example, Amossy (2002a and 2002b) for an overview and a somewhat more literary approach than mine, or Bourdieu's.
13. Bourdieu and Eagleton (1992: 114).

14. Bourdieu (1998: 47).
15. In the hermeneutical tradition, which in some cases has close affinities with my doxological approach, these kind of presuppositions or prejudices, at least after Gadamer, are called *Vorverständnisse*.
16. Bourdieu (2000: 100).
17. Bourdieu (2000: 9).

4 Caves

1. These dates are not final. They will no doubt be revised several times in the future. Nevertheless, this is the consensus of the field today so I guess it is safe to say that the cave-painting practice went on for at least this long. Still, it is wise to be cautious here – at a seminar (December 2007) where I presented some of the main ideas in this book to professional archaeologists, the general opinion was that since this period of time is surprisingly long, there are probably some problems with the dates. Being a layman in this area, I rest my case as to the exact dates of the oldest and the latest paintings. From my perspective, even if the practice of cave painting went on for, say, 'only' 5,000 years, it is still long enough to make relevant the questions that I pose in this section.
2. The assessments of age are constantly changing – please see note 2 section 1.
3. For a recent comment on all this, see 'Une énigme sortie des abîmes du temps' by Sylvestre Huet in *Libération*, 31 August 2011. The author claims that the incontestable dating of the paintings in the Chauvet cave (between 32,000 and 36,000 BP, according to the author) 'réduisait à néant trente années de reconstitution d'une chronologie stylistique des grottes ornées' [roughly: 'reduced to nothing 30 years of attempts to establish a chronology of the painted caves based on stylistic features']. See http://next.liberation.fr/cinema/01012357022-une-enigme-sortie-des-abimes-du-temps. (last visited 23 February 2012) See also von Petzinger and Nowell (2011) for a critique of the stylistic approach to dating.
4. Bataille (1979: 11).
5. Shiner (2001: 3). And he continues, a page later, in a very doxological way: 'Only by a deliberate effort can we break the trance induced by our culture and see that the category of fine art is a recent historical construction that could disappear in its turn' (2001: 4–5).
6. I have written about this before; see especially chapters 3 and 4 of Rosengren (2006), but also, in English, Rosengren (2004) for a somewhat less-detailed discussion concerning the usage of the term 'epistemology'.
7. Bradley (2009: 7).
8. See Rosengren (2007).
9. See Rosengren (2005) for a development of these thoughts.
10. Term and concept are of course not identical – but it is not possible to make the distinction between a term and the concept it is supposed to be representing in a general way. The distinction term/concept may and must in many cases be drawn – but it can never be an absolute distinction; it has each time to be situated and motivated within a specific epistemic and/or

linguistic situation, in relation to (linguistic) practices and to the dominant (linguistic) doxa.

11. As we will see below, the term 'art' was adopted without any hesitation from the very first moments of cave-art studies.
12. Bahn and Vertut (1997: 6).
13. Soffer and Conkey (1997: 2–3).
14. Derrida (1967: 412–414; 1978: 357).
15. Derrida (1978: 360).
16. Elsewhere, I have presented *bricolage* as the preferred doxological method. See Rosengren (2010).
17. Lorblanchet (1992: 116–117). The quotes are, according to the information in Lorblanchet's text, taken from Margret Conkey, 'New approaches in search for meaning? A review of research in Paleolithic Art'. *Journal of Field Archeology* 14: 413–430 (1987: 414).
18. This postcard was sent to me by my friend and colleague Pierre Dumesnil. Thank you! The references on the card are: Grotte de Lascaux, *La grande sale des tauraux*, carte postale (2004) Édtions la noisette/le baobab CL 031: Printied in UE.
19. Lorblanchet (1999: 8).
20. Lorblanchet (1999: 8).
21. Lorblanchet (1999: 8).
22. Lorblanchet (1999: 8).
23. See, for example, Alain Roussot (1997: 17–29).
24. For a full and well argued and documented account of the discovery of ice age art in general, and of the Altamira controversy specifically, see Bahn and Vertut (1997: 14–22).
25. Quoted after Marc Groenen (1992: 71).
26. Groenen (1992: 71).
27. Desdemaines-Hugon (2010: 100).
28. See below, the last part of the section, 'The degree zero of perception'.
29. See Bahn and Vertut (1997: 17) for a listing of some of the reasons why Sanz de Sautuola's discovery was rejected by the scientific community.
30. In a paper called 'Art Paléolithique?' presented at the seminar of Prof. François Lisarrague, Centre Louis Gernet, EHESS, Paris, 7 May 2003.
31. Bradley (2009: 5).
32. Bradley (2009: 6).
33. See the recent *L'Abbé Breuil – le Pape de la Préhistoire*, in which theologian and historian of science Jacques Arnould explores a bit further the rivalry between the Spanish and the French, which seems to have had an important part in the rejection of Sanz de Sautuola's claims. Arnould (2011: 36–44).
34. Cartailhac (1902).
35. Bahn and Vertut (1997: 22).
36. Roussot (1997: 17–19).
37. Groenen (1992: 7).
38. For a detailed discussion of the social aspects of the creations of scientific facts, see Rosengren (2003; 2011) and below, the section on Ludwick Fleck's epistemology.
39. Bahn (1998: 60).
40. Clottes (1995: 41).

41. Clottes (1995: 42).
    The quotation rendered by Clottes – 'Il y a des dessins sur la paroi; qu'est-ce que cela peut bien être?' – is not exactly the same as the ones that were presented to me by the guides when I revisited the cave in July 2005 (as can be seen in the picture), which may be due to a mistaken rendering by his source (Molard, Cdt, 1908, 'Les grottes de Sabarat (Ariège). Niaux et les dessins préhistoriques (Ariège)', *Spelunca, Bull. et Mém de la Soc. de spéléologie,* 7, 53, 177–191, 2 pl en h.t.) or may indicate that there is a third notation about the drawings made by Garrigou. Anyway, it is quite obvious that Garrigou saw the drawings at least twice within a period of six weeks without realizing what he saw, despite his curiosity.
42. See http://www.univ-tlse2.fr/utah/bedeilhac/index.html (website last visited 15 April 2012) for references and a complete and detailed presentation of the cave and its history.
43. Bahn (1998: 58).
44. Laming-Emperaire (1962: 38–39). It is interesting to note that the quotation given by Laming-Emperaire is identical with the one reported by Clottes. Laming-Emperaire obviously had not seen Garrigous's notebook, and she refers to the same source as Clottes.
45. Clegg (1991: 109–110). Even though I find the comments on perception just quoted quite convincing, I do not share Clegg's general approach (that the problem is only one of vocabulary) nor his conclusion (that 'there is a need for a convention to indicate whether a term is in use as a name or label', 111) presented in this article.

5 Doxa

1. I read and quote Fleck's work in English, following the Phoenix edition of the translation by Fred Bradley and Thaddeus J. Trenn: *Genesis and Development of a Scientific Fact*, University of Chicago Press. Chicago: 1981.
2. See, for example, Thomas S. Kuhn's foreword to the English translation, vii–xi. This foreword, written in 1976, is interesting for many reasons, not least for Kuhn's attempt to untangle himself from the more radical parts of Fleck's thought while still trying to remain within it. After the turn of the millennium, Fleck's work is now finally becoming acknowledged – recent translations, dissertations exploring his work, as well as the series of seminars and lectures given by Ian Hacking at the Collège de France during the academic year 2002–2003 are examples of this.
3. Fleck (1981: 38).
4. Here, I am using the word 'practical' to cover all the, in the traditional sense, doing-related aspects of the process of knowing. I am quite aware that 'practical' is a rather insufficient word in this context.
5. Fleck (1981: 10–11).
6. See Holmqvist (1994: 105).
7. See Fleck (1981: 103) for the distinction between transient and stable thought collectives.
8. Fleck (1981: 99).
9. See, for example, Bourdieu (1997: 163).

10. For example, when dating the recently (1995) discovered engravings in Foz Coa, Portugal. For a recent critique of style as a measurement of dating art, see von Petzinger and Nowell (2011).
11. Fleck (1981: 83).
12. Fleck (1981: xxvii).
13. The same goes evidently for every attempt to coin a new word – the place and sense of the new word must be explained in terms of the always already existing ones.
14. Castoriadis describes this ignorance as a heteronomistic cover-over of our creative, autonomous powers. This is a strong connection between Fleck and Castoriadis, and I will come back to this point in due course.
15. Fleck (1981: 40).
16. Fleck (1981: 141. Translation slightly revised).
17. Fleck (1981: 41).
18. Fleck (1981: 40).
19. Fleck (1981: 42).
20. Fleck (1981: 103–104. Translation slightly revised.).
21. Fleck (1981: 44).
22. Fleck (1981: 44).
23. Fleck (1981: 47).
24. See also below, chapter 7.
25. Castoriadis (1997b: 269).
26. Fleck (1981: 100).
27. Fleck (1981: 100).
28. Fleck (1981: 99).
29. Barthes (1977: 122).
30. Fleck (1981: 101).
31. See Bourdieu (1980: 113–120), 'Quelques propriétés des champs'.
32. Fleck (1981: 101).
33. Montaigne (2003: 185). Book one of *The Essays* was first published in French in 1580.
34. Fleck (1981: 102).
35. Compare with what Haraway calls the God trick (1991: 189).
36. When I say scientifically acceptable I mean, of course, that Fleck's thoughts should be acceptable to 'hard' scientists and social and human scientists alike – there is simply no essential difference between the different branches, only differences in thought styles, communities and interests.
37. Fleck (1981: 42).
38. A full presentation of Gärdenfors's thoughts on conceptual spaces can be found in Gärdenfors (2000).
39. For all this, see Gärdenfors (2000: 101.). For concept formation, see especially section 4.5.
40. Gärdenfors (2000: 125).
41. Gärdenfors (2000: 127).
42. Elgin and Goodman (1988).
43. Elgin and Goodman (1988: 136).
44. See von Petzinger and Nowell (2011: 1165–1166).
45. But there are signs that, apart from the work of von Petzinger and Nowell, this assurance is crumbling. For example, Desdemaines-Hugon writes that

'There is a "before and after Chauvet" phenomenon: the days of well-established chronological stylistic phases are now over'. (2011: 80).

46. von Petzinger and Nowell (2011: 1174). I have excluded from the quote the references the authors give to support their claims – please see their article for this. The names Mousterian, Châtelperronian and Aurignacian, Solutrean, Magdalenian denote different periods; Mousterian being the oldest, Magdalenian the youngest.
47. Clottes and Lewis-Williams (2001: 45).
48. Svenbro (2004).
49. Aristotle, *De sensu*, 438a. I translate directly from Svenbro's French text, for reasons that will become apparent.
50. Sacks, *Awakenings* (1982: 102–103). The quote and the reference are taken from Svenbro (2004).
51. Svenbro (2004).
52. Gärdenfors (2003).
53. Gärdenfors (2003: 26).
54. Gärdenfors (2003: 25).
55. Gärdenfors (2003: 26).
56. Gärdenfors (2003: 27).
57. Gärdenfors (2003: 27).
58. Gärdenfors (2003: 11). Gärdenfors attributes this opinion to the philosopher Mark Johnson and, if I am not completely mistaken, he does agree with Johnson on this point.
59. Gärdenfors (2003: 31).
60. Gärdenfors (2003: 29).
61. Gärdenfors (2003: 31).
62. Gärdenfors (2003: 31).
63. Gärdenfors (2003: 27).
64. Gärdenfors (2003: 11).
65. Please note that when Gärdenfors talks about the brain here (and elsewhere) he is not talking about the brain as it is 'in and of itself' – the concept of 'the brain' is obviously as much a construct as every other concept, and the question of what, if anything, it 'corresponds' to in the 'real world' simply does not arise. But in the world of experience – that is in what I would like to call, following my Protagorean taste, our human world – talk about the brain (of course) refers to the organ, situated in the skull of normal members of the race, Homo sapiens, that we do not yet know how to transplant, that has a cortex and so forth.
66. Gärdenfors (2003: 32).
67. Gärdenfors (2003: 45n).
68. Already in 1931, Cassirer gave a talk – 'Language and the Construction of the Object world' in which he gave the outlines of some of the central aspects of the program realized by Gärdenfors.
69. Gärdenfors (2003: 25).
70. Gärdenfors (2003: 49).
71. Clottes and Lewis-Williams (2001: 45–46).
72. I discuss the interpretations of cave art in section 6.
73. There are, of course, exceptions to this rule – Schefer (1999) and Jouary (2001) seem to be two.

6 Caves

1. Laming-Emperaire (1962: 72).
2. For field effects, see Bourdieu, many places, for example 'Quelques propriétés des champs' in *Questions de Sociologie*, Minuit, Paris (1980: 113–120).
3. Groenen, in Leroi-Gourhan, (1992: 7).
4. Laming-Emperaire (1962: 63).
5. Anati (2003: 45–46). For Anati's version of the history of interpretations, see 2003, 44–56. The only additions to the structure established by Laming-Emperaire (see below) are what Anati calls 'La théorie des calendriers' (51), 'La théorie du Chamanisme' (51–52), La théorie de la déesse mère' (53) and 'La théorie "instinctive"' (54–55).
6. For this summary I rely mainly upon (in alphabetical order) Bahn and Vertut (1997), Clottes and Lewis-Williams (2001), Curtis (2006), Groenen (1992), Leroi-Gourhan (1992), Lamning-Emperaire (1962) and Lewis-Williams (2002).
7. Laming-Emperaire (1962: 65–70; especially 68 and 70). Laming-Emperaire mentions Cartailhac as one of the representatives for this point of view, but notes that he rejected the notion of leisure as a precondition for making art.
8. Bahn and Vertut (1997: 171).
9. Curtis (2006: 228).
10. Another interesting, well-documented and well-written book in this genre, where the modernity of the cave art is a recurrent theme, is *Stepping Stones* by Christine Desdemaines-Hugon (2010). It also echoes another recurring theme of the field – that there is absolutely no doubt that the images we find in the caves are examples of art in the aesthetic sense of the word. Desdemaines-Hugon talks about the 'artists'' sense of beauty (for example, 23), makes recurrent comparisons between twentieth-century art and the Palaeolithic images and engravings (for example 26 and 189) and, towards the end of her book, makes the following declaration: 'If one thing has slowly become clear to me over the years…it is the existence of a timeless, universal appreciation of beauty' (191). She continues: 'What moves us today, whether for aesthetic or mystical reasons, also touched these Palaeolithic artists. I'm certain of it. Stylistic conventions, techniques, cultural motivations may vary over time, but a certain expression, a perfect line, a balanced composition, a particular shade of color can lift our spirit today, as it did then. Beauty is spiritual' (192). Needless to say that, despite my appreciation of other parts of Desdemaines-Hugon's book, I completely disagree with her (for reasons that, for instance, my discussion of Curtis will spell out) concerning the timelessness of beauty or aesthetic appreciation.
11. Curtis (2006: 229).
12. Curtis (2006: 229).
13. Gärdenfors (2003: 199).
14. Raphaël (1945: 1–2).
15. Curtis (2006: 229).
16. Curtis (2006: 232).
17. I will come back some other aspects of this disturbing question towards the end of this book.

18. See Laming-Emperaire (1962: 72–75) for references.
19. Laming-Emperaire (1962: 75).
20. For a late example, highlighting in a pedagogical way the possibilities of analogical argument while at the same time avoiding the pitfalls of reducing ancient cultures to versions of contemporary ones, or vice versa, see White (2003: 20–35). But – despite his efforts to make a case for a non-universal, non-natural interpretation of the images in the caves and his stressing of the cultural dependency of perception – White still succumbs to 'the mimetic curse' so widespread in cave-art studies: After having (rightfully) criticized a scholar for unduly transforming the pictures in Altamira to art in the Western sense of the word and for adding elements of which he cannot know anything, White states (about the famous bison of Altamira, painted on a rock protruding from the ceiling of the cave): 'The bison is not wounded, dying, or in agony but rolling on the ground with legs flexed, a movement common in bison behaviour.' (White 2003: 22) White may of course be right, but he does not see that, in his eagerness to make a correct interpretation of the depicted bison, he makes exactly the same mistake as the scholar he is criticizing.
21. Lewis-Williams (2002: 47).
22. Bahn and Vertut (1997: 177–179).
23. See, for example, Jouary (2001: 66).
24. Laming-Emperaire (1962: 117).
25. Clottes and Lewis-Williams (2001: 84) Curtis (2006: 122), Lewis-Williams (2002: 52), Jouary (2001: 66) and also Laming-Emperaire, (1962: 119), even though the latter seems to consider Raphaël's contribution mostly as a more developed form of totemism.
26. Raphaël (1945: 1).
27. Groenen (1992: 92); Lewis-Williams (2002: 52); Curtis (2006: 121).
28. White (2003: 56); Anati (2003: 49), Bahn and Vertut (1997: 189).
29. Laming-Emperaire is here (1962: 119) referring to a then-unpublished manuscript that Raphaël sent her in 1951, and not explicitly to his 1945 book, though this latter volume is listed also in her bibliography.
30. Raphaël (1945: 11).
31. Laming-Emperaire (1962: 119).
32. Lewis-Williams (2002: 56–57) The quotes within the extract are from Laming-Emperaire (1959: 200 and 180), according to Lewis-Williams's own notes.
33. Lewis-Williams (2002: 57).
34. Groenen, in Leroi-Gourhan (1992: 95).
35. See Bahn and Vertut (1997: 189–197) for a detailed presentation of the theories of Laming-Emperaire and Leroi-Gourhan, and for their positions in the field.
36. Cf. The title, *L'art pariétal – langage de la préhistoire*, Leroi-Gourhan (1992).
37. Laming-Emperaire came to the opposite conclusion, claiming that horses represented the female position and bison the male (Clottes and Lewis-Williams 2001: 86) – but this is not as paradoxical as it might seem, since it is the principle of opposed poles around which the language is structured that is central to the structuralist position, not which (type of) picture is attributed to which pole.

38. Curtis (2006: 161).
39. Lewis-Williams (2002: 55).
40. Lewis-Williams (2002: 63).
41. Curtis (2006: 156).
42. In a discussion we had in the spring of 2003, François Lissarague confirmed the importance of Leroi-Gourhan's approach to the whole milieu of archaeology, ethnology and anthropology in France in the 1960s. He especially underlined the importance, for a whole generation of researchers, of his work at Pincevent (Curtis writes about Pincevent – see 2006: 156).
43. Curtis (2006: 164) and Clottes and Lewis-Williams (2001: 88).
44. Clottes and Lewis-Williams (2001: 90).
45. Clottes and Lewis-Williams (2001: 89, 152).
46. Clottes and Lewis-Williams (2001: 14, 93).
47. Clottes and Lewis-Williams (2001: 17).
48. Clottes and Lewis-Williams (2001: 17).
49. Clottes and Lewis-Williams (2001: 17–18).
50. Clottes and Lewis-Williams (2001: 18).
51. Clottes and Lewis-Williams (2001: 94).
52. Clottes and Lewis-Williams (2001: 94).
53. Clottes and Lewis-Williams (2001: 155).
54. Lorblanchet et al (2006: 5).
55. Lorblanchet et al (2006: 6).
56. Lorblanchet et al (2006: 6).
57. Lorblanchet et alt (2006: 6, 7).
58. Curtis (2006: 217).
59. Curtis (2006: 227).
60. See, for example, Bahn's virulent but well-argued and (as far as I can judge) well-founded attack on the shamanist theory in his *Prehistoric Rock Art* (2010).
61. A recent and very interesting example of how the notion regarding the Palaeolithic traces in the caves (and elsewhere) as some kind of language, or proto-language, still generates new ideas is seen in the highly mediatized reception of Genevieve von Petzinger's research. Von Petzinger has established an extensive database of the 'non-representative' and/or geometrical signs found in Palaeolithic art in France, with the ambition to eventually expand it to include Palaeolithic signs worldwide. See von Petzinger and Nowell (2011) and von Petzinger (2009). See also note 50, chapter 7 below.
62. For a thorough description and discussion of the problems involved in 'objectifying' a domain wherein you, yourself, are an actor, see Pierre Bourdieu's study, *Homo Academicus* (1984; English translation 1988), especially chapter 1.
63. Lewis-Williams (2002: 48).
64. Lewis-Williams (2002: 48–49) I have rendered Lewis-Williams's wording quite closely, but my paraphrasing is not to be taken as a true quote.
65. Fleck (1981: 38).
66. Lewis-Williams (2002: 49).
67. In *L'Ordre du Discours*, Foucault's inaugural lecture at Collège de France, published by Seuil, Paris (1971: 36).
68. Lewis-Williams (2002: 48).

69. For all this, especially concerning the role of the audience in scientific argumentation, see the seminal work of Chaïm Perelman, *Traité de l'Argumentation – la Nouvelle Rhétorique*, Paris (1958).
70. Which of course may very well be a valid one, in a specific setting. For instance, I agree with Lewis-Williams when he says the art-for-art's-sake hypothesis fails to comply with this requirement and therefore should be rejected.
71. Bloor (2007: 266).
72. One telling, and still urgent, example is Bourdieu's book on how television has transformed the journalistic field. Bourdieu (1998).
73. For a discussion of how the notion of topoi or topics can be used to characterize a doxa, see Rosengren (2004).
74. For a recent (2010) and very interesting example, see Werner Herzog's film *The Cave of Forgotten Dreams* about the Chauvet cave.
75. Until quite recently the centre of cave-art research was undoubtedly located in France. (See Anati (2003: 45–46), quoted above).
76. I will not even try to be more specific than this, claiming that the point of my study will get lost if I haphazardly and in a quite ad hoc manner would start to mention some institutions, journals or museums that occur to me and my half-informed perspective as central or marginal, as avant-garde or as passé, etc. A real, thorough study of the field and the doxa of cave art would, of course, imply a detailed sociological overview of the institutions in question, their interrelations, history, institutional status and respective 'force' within the field, etc. –something that I am not capable of providing here.
77. I am painfully aware that all this is very general and in a way uninformative. A proper investigation of the thought style of cave at studies would need to be much more specific than I can be here, taking heed of linguistic differences as well as of the different positions within the national scientific fields of cave-art studies in each country, etc. For an in-field survey by one of its major actors, see Clottes (1992).
78. Bahn (2010) may perhaps be seen as an example here.
79. All this is, of course, well known to anyone familiar with the works of Pierre Bourdieu or Michel Foucault.
80. See Lorblanchet (1992) for an interesting and critical in-field description of the creation and consequences of the dominance of the art-as-naturalistic-depiction topos in cave-art studies.
81. See Lorblanchet (1992) again for a well-argued overview of the rampage of the notion of 'naturalism' within cave-art studies.
82. The notion of magma is central in the philosophy of Cornelius Castoriadis, as are social imaginary significations, denoting, by and large, the same phenomenon as I want to catch with the term doxa.

7 Caves and Doxa

1. Castoriadis (1997a: 228) The quote is from the essay 'Imagination, Imaginaire, Réflexion'
2. Castoriadis (1997a: 212) The quote is from the essay 'Complexité, Magmas et Histoire'

3. Castoriadis (1997a: 213) The quote is from the essay 'Complexité, Magmas et Histoire'
4. Castoriadis (1996: 110) The quote is from the essay 'Anthropologie, Philosophie, Politique'
5. Castoriadis (1997a: 267) The quote is from the essay 'Imagination, Imaginaire, Réflexion'. The translation is a slightly revised version of the English one, published as 'Radical Imagination and the Social Instituting Imaginary' in Castoriadis (1997b: 332).
6. A note on terminology: I do not really know how to translate the French '*la technique*'. Should I stick to the English 'technique', and reserve 'technology' for the more specific sense of 'teaching of technique', or 'teaching(s) about technique' – or should I follow what I think is 'ordinary usage' and treat the two terms as complete synonyms? I have so far opted for the last choice, but is that wise?
7. Castoriadis (1978: 301) The quote in the extract is from Aristotle, *Physics*, B, 8, 199a, 15–17
8. One *locus classicus* would be Wladyslaw Tatarkiewicz's *History of Aesthetics*. Tatarkiewicz (1970, 1974) For the different senses of the Greek *technē* see Tatarkiewicz (1970, vol. 1: particularly 139).
9. Prat (2007: 93).
10. Castoriadis (1978: 289–290).
11. Castoriadis (1978: 290) Gärdenfors makes basically the same point, albeit phrased in another language, in the chapter called 'Externalizing the inner world' in Gärdenfors (2003: 197).
12. Castoriadis (1978: 291–295).
13. Castoriadis (1978: 296).
14. Castoriadis (1978: 297).
15. Castoriadis (1978: 299).
16. Castoriadis (1978: 300).
17. Castoriadis (1978: 306) Here one can hardly avoid hearing an echo of Martin Heidegger's famous essay on technology, translated into English as *The Question Concerning Technology* (Heidegger: 1977), quoted and criticized by Castoriadis several times in the text.
18. Castoriadis (1978: 291).
19. Castoriadis (1978: 303).
20. Castoriadis (1978: 304).
21. Castoriadis (1978: 305–306).
22. Castoriadis (1978: 307).
23. Castoriadis (1978: 317n).
24. Castoriadis (1978: 322).
25. Castoriadis (1978: 307).
26. Castoriadis (1978: 309).
27. Castoriadis (1978: 310).
28. Castoriadis (1978: 312).
29. Cassirer (2000: 107) I have altered the translation of the German *Geist* from 'spirit' to 'mind' to make it harmonize with the latest translation of Cassirer to English. See Cassirer (2012).
30. I am referring to the philosophical content of the simile of the cave, evoked in the beginning of this book, and to Plato's famous critique of mimesis in

the *Republic*. Plato's notion of mimetic representation is, as we have seen, ubiquitous in the cave-art studies even today.

31. Cassirer (2000: 108).
32. Neher (2005: 360) The location of the quotation is Cassirer (1957: 93). But here I have chosen to follow Alister Neher and quote his quote from C.H. Hamburg's 'Cassirer's Conception of Philosophy', in *The Philosophy of Ernst Cassirer*, P. Schilpp, ed. (Lasalle: Open Court (1949: 78). The reason is simply that it brings out more clearly what I take to be the main point of Cassirer's definition (and I guess that is the reason why Neher chose it as well). Neher's article (2005) is interesting and well-argued, and the precision of his arguments makes it a valuable starting point for anyone who would like to use the notion of symbolic form in whatever context.
33. Cassirer (1957: 202) I have altered the translation of the German *geistlich* from 'spiritual' to 'mental' to make it harmonize with the latest translation of Cassirer to English. See Cassirer (2012).
34. Cassirer (1957: 200).
35. Cassirer (1946: 34).
36. Neher (2005: 364).
37. Fleck (1981: 100), also quoted above.
38. Neher (2005: 372, n 22) The references given by Neher are the following: Ernst Cassirer, 'Zur Logik des Symbolbegriffs', *Theoria* 4 (1938): 173. Hamburg's translation, 'Cassirer's Conception of Philosophy', in *The Philosophy of Ernst Cassirer*, P. Schilpp, ed. Lasalle: Open Court, 1949, 119.
39. See for example the well-known essay 'Signature, événement, context' (Derrida 1972).
40. Cassirer (1957: 202).
41. For all this, see Derrida (1967), specially the essay 'La structure, le signe et le jeu dans le discours des sciences humaines' (1967: 409–428).
42. Neher (2005: 262).
43. Cassirer (1953: 87).
44. Cassirer (1953: 87).
45. Cassirer (1953: 88).
46. Castoriadis (1997a: 228).
47. Neher (2005: 360).
48. Cassirer (1996: 50).
49. Cassirer (1996: 51).
50. A recent and very promising new turn in how to address the extant material is outlined in the master thesis of Genevieve von Petzinger. Von Petzinger has established a database, including all signs (but not the images) from the painted Palaeolithic caves in France, allowing for cross-referencing where, when and in what context a sign occurs, when it first occurred, its frequency, how it was made, etc. See von Petzinger (2009). I see von Petzinger's research as a very promising first step, perhaps allowing, in the not too distant future, for establishing the concordances necessary to start revealing possible rules of combination for these elements. And, even if these potential rules may not be a syntax in the proper sense of the word, perhaps they can fruitfully be seen as part of the 'architectonical principles' of a symbolic form. See http://www.bradshawfoundation.com/geometric_signs/index.php for the latest developments in von Petzingers research.

51. Jouary (2001: 135).
52. Jouary (2001: 145).
53. In a tentative paper called 'Materiality and meaning-making in the Palaeolithic "arts"', Margret Conkey explores an approach similar to the one I am arguing for here. She writes, bringing out the social and political aspects of the material approach: 'The material culture must be taken on its own terms, not as mere signs in the cultural arena. As interpreters, we are concerned with *how* signs signify, as much as with what they might signify, and this is necessarily social *and* political.' Conkey (2009: 181).
54. I am not saying that there is such a principle, nor that all cave art should comply with one and the same universal principle – if there is anything like such a principle, it is probably both locally situated, multilayered and pluralistic. My argument here concerns the possibility of making sense out of cave art.
55. Malafouris (2007: 293) See also Malafouris (2008) for a development of the Blind Man's Stick-argument.
56. Malafouris (2010: 18).
57. See the quote above, at the beginning of the first section.
58. Cassirer, (1955: 215) Here, I have again altered the translation of the German *geistlisch* from 'spiritual' to 'mental' to make it harmonize with the latest translation of Cassirer to English. See Cassirer (2012).
59. I find this passage to be remarkable. It is as if Cassirer was partaking in today's debates instead of writing in the 1920s. But this only shows that good ideas need time.
60. Cassirer (1955: 215–216).
61. Cassirer (1955: 217).
62. Cassirer (2012).
63. Cassirer (2012: 17).
64. Cassirer (2012: 17–18).
65. Cassirer (2012: 20).
66. Cassirer (2012: 36).
67. Cassirer (2012: 38).
68. I do not think that the difference between contemporary artistic and technical creation and beauty that Cassirer discusses at length towards the end of his text, a discussion that in itself would merit a careful and subtle analysis, has any real bearing on my argument concerning cave art as a tool, so I set it aside here.
69. For details, see especially Lorblanchet's own article 'Rencontres avec le chamanisme' in Lorblanchet et al (eds.) (2006).
70. The full story is presented in Lorblanchet (1995: 209–223) and partly updated in Lorblanchet et al (2006).
71. In his 1995 book Lorblanchet has a long argument concerning the eventual effects of toxicity of the manganese oxide that was part of the original dyes. This argument is developed into an outright critique of the shamanist thesis in Lorblanchet (2006) – but I set this debate aside, since it is of no direct interest for our main concerns here. The *locus classicus* for a presentation and arguments for the shamanist theory are, as discussed above, Jean Clottes and David Lewis-Williams (2001).
72. See Lorblanchet et al (2006: 107).

73. Lorblanchet (1995: 210–216).
74. It seems quite probable that not all art in the caves served the same purpose – for example, big paintings in accessible areas (such as the big hall in Lascaux) were probably intended to be seen by more people than just the painters, and were perhaps also used in rituals of one kind or another; other paintings and engravings are obviously hidden in the most remote and hard to get to parts of the caves, indicating another usage and significance.
75. Lorblanchet (1995: 222).
76. Lorblanchet (1995: 223).
77. See, for example, Laming-Emperaire, Annette (1962) and Leroi-Gourhan, André (1992).

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